

ADDITIONAL POWER SUPPLY TO IBN-SINA
SEC ROOM IBN SINA 230KV S/S
CONTRACT NO: 11-ER203

IFC SUBMITTAL FOR
DIGITAL FAULT RECORDER SYSTEM

JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
3-1213004	P	T413	ED-306151	01 of 24	00

NOTES

AMETEK S.O.# : 11002273-3	
AMETEK DRAWING# : D-1105-212	
SAITE P.O. # : API-D-0826-06656	
REFERENCE DRAWINGS	
DRAWING TITLE	DRAWING NO.
DRAWING CONTROL SHEET NUMBER	ED-306014

ISSUED FOR CONSTRUCTION

AS-BUILT BY		DATE	
00	27/01/15	SKT	ISSUED FOR CONSTRUCTION
MA			

REV. NO.	DATE	BY	DESCRIPTION	CHKD.	CERT.	APP'D.
الشركة السعودية للكهرباء Saudi Electricity Company						
DRAWN BY: MA CHECKED BY: SCALE: NONE						
DATE STARTED: 28-11-12 DATE COMPLETED:						
DPR'G. DEPT.: ENG. DEPT.:						

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNTIL CERTIFIED AND DATED		CERTIFIED BY: DATE:	
TR-2200 FAULT RECORDER			
COVER PAGE			
SEC-ROOM : IBN SINA S/S			
JUBAIL		SAUDI ARABIA	

JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
3-1213004	P	T413	ED-306151	01 of 24	00
SEC-ERB CAD-A (2002/04)			1105-212_1.DWG		
DMS			VECTOR		
Code03					

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03 of 24

ED-306151

T413

P

3-1213004

JOB ORDER NO.

00

03 of 24

ED-306151

T413

P

3-1213004

JOB ORDER NO.

1

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LAYOUT DRAWINGS

SCHEMATIC SYMBOL

120VAC OUTLET

220VAC OUTLET

ARRIVA-PRIMA RELAY AND BASE

SCHEIDER ELECTRIC DOUBLE CIRCUIT BREAKER

MTK TERMINAL BLOCK

UMK-RJ11 PHONE SWITCH

AMETEK CICT TRANSFORMER

DOOR SWITCH

FT1 TEST SWITCH

120VAC OUTLET

220VAC OUTLET

ARRIVA-PRIMA RELAY AND BASE

SCHEIDER ELECTRIC DOUBLE CIRCUIT BREAKER

MTK TERMINAL BLOCK

UMK-RJ11 PHONE SWITCH

AMETEK CICT TRANSFORMER

DOOR SWITCH

FT1 TEST SWITCH

URTKS-BEN TERMINALS SLIDING LINKS

FERRAZ-SHAWMUT FUSE BLOCK

PHOENIX SOLID STATE RELAY

HEATER

SYSTEM SAFETY GROUND

WIRE END LOCATOR

THERMOSTAT

FLOURESCENT LIGHT FIXTURE

FAN WITH SPEED CONTROL

URTKS-BEN TERMINALS SLIDING LINKS

FERRAZ-SHAWMUT FUSE BLOCK

PHOENIX SOLID STATE RELAY

HEATER

SYSTEM SAFETY GROUND

WIRE END LOCATOR

THERMOSTAT

FLOURESCENT LIGHT FIXTURE

FAN WITH SPEED CONTROL

TS1

TS2

TS3

ABB

TS1

TS2

TS3

ABB

NOTES

INSTALLATION NOTES:

1. CUSTOMER WIRING SHOWN DASHED. AMETEK FACTORY WIRING SHOWN SOLID.

2. EACH CABINET IS EQUIPPED WITH 90° DOOR STOPS AND PADLOCK TYPE DOOR HANDLES.

3. THE CABINET IS RATED IP41, WITH FRONT / REAR ACCESS & TOP / BOTTOM CABLE ENTRY.

EXTERIOR FINISH: RAL7038

INTERIOR FINISH : RAL9003

SERVICE NOTES:

1. THE TR-2000 SYSTEM IS WIRED FOR 32 ANALOG AND 128 DIGITAL CHANNELS.

2. THE TR-2000 HAS BEEN CONFIGURED AND CALIBRATED AT THE FACTORY AS FOLLOWS:

CHANNELS CURRENT: REF. WIRING

CHANNELS VOLTAGE: REF. WIRING

3. BOTH VOLTAGE INPUT AND CICT OUTPUTS ARE TO BE WIRED TO FT-19R VOLTAGE TEST SWITCHES. THE FULL-SCALE SIGNAL APPLIED TO THE TR-2000 INPUT FOR VOLTAGE CHANNELS IS 300V PEAK AND 2V PEAK FOR CURRENT CHANNELS.

4. CICT'S (CURRENT ISOLATOR CT) ARE PROVIDED LOOSE PIECE FOR CURRENT INPUTS. CICT OUTPUT IS 70.7mVAC (RMS) AT THE RATED NOMINAL INPUT (1A/5A AMPS). FULL-SCALE CURRENT IS 20 TIMES THE NOMINAL VALUE (20/100 AMPS).

5. TO CHANGE A CHANNEL FROM CURRENT TO VOLTAGE OR FROM VOLTAGE TO CURRENT, CHANGE THE JUMPER ON THE INPUT MODULE AND RE-CALIBRATE THE INPUT (REF. TO THE TR-2000 INSTRUCTION MANUAL.)

6. DIGITAL INPUT FIELD CONTACT VOLTAGE IS 125VDC.

7. SYSTEM POWER IS 125VDC. THE COURTESY OUTLET, LIGHT AND PRINTER REQUIRE 220VAC. THERE IS ALSO 120VAC OUTLET AVAILABLE.

8. TR-2000 VISUAL STATUS INDICATORS ARE ON THE FRONT OF THE TR-2000. STATUS OUTPUTS ARE WIRED TO X101.

9. ALL LABELING TAGS SHOWN ARE ENGRAVED LAMACOID, BLACK LETTERING ON WHITE BACKGROUND. REFERENCE PAGE 9 FOR TAG DETAILS.

10. ALL DIMENSIONS ARE IN INCHES [MM].

11. CIRCLED NUMBERS WITH ARROWS INDICATE THE BILL OF MATERIAL REFERENCED ON PG 10.

AMETEK S.O.# : 11002273-3

AMETEK DRAWING# : D-1105-212

SAITE P.O. # : API-D-0826-06656

REFERENCE DRAWINGS

DRAWING TITLE

DRAWING NO.

DRAWING CONTROL SHEET NUMBER

ED-306014

ISSUED FOR CONSTRUCTION

AS-BUILT BY

DATE

0027/01/15

SKT

ISSUED FOR CONSTRUCTION

MA

REV. NO.

DATE

BY

DESCRIPTION

CHKD.

CERT.

APPD.

الشركة السعودية للكهرباء

Saudi Electricity Company

DRAWN BY

MA

CHECKED BY

SCALE

NONE

DATE STARTED

28-11-12

DATE COMPLETED

OPR'G. DEPT.

ENG. DEPT.

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CERTIFIED BY

DATE

TR-2200 FAULT RECORDER

DRAWING SYMBOLS SHEET

SEC-ROOM : IBN SINA S/S

JUBAIL

SAUDI ARABIA

JOB ORDER NO.

INDEX

PLANT NO.

DRAWING NUMBER

SHEET NO.

REV. NO.

3-1213004

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ED-306151

03 of 24

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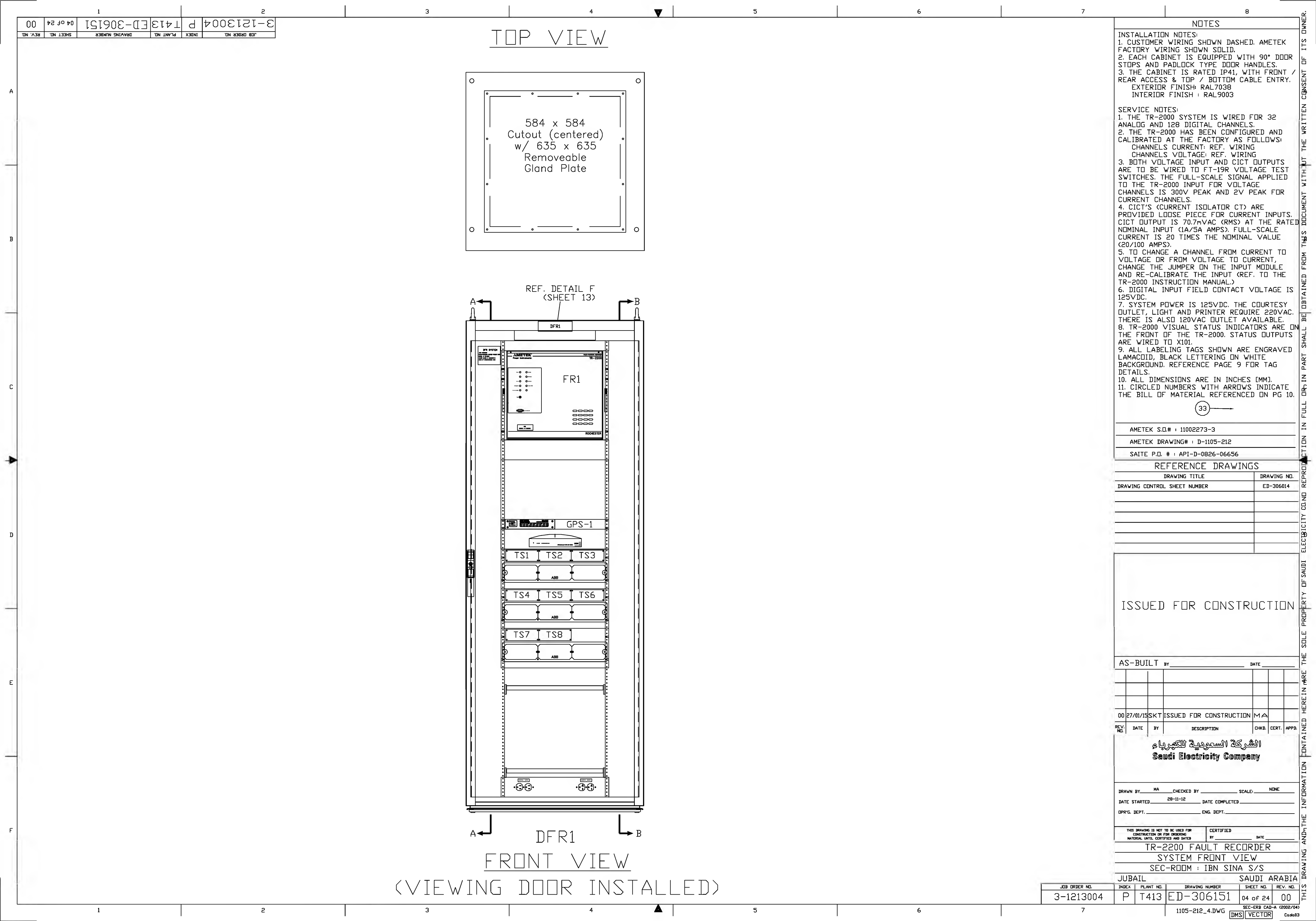
SEC-ERB CAD-A (2002/04)

1105-212_3.DWG

DMS VECTOR

Code03

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3-1213004		P		ED-306151		05 of 24		00							

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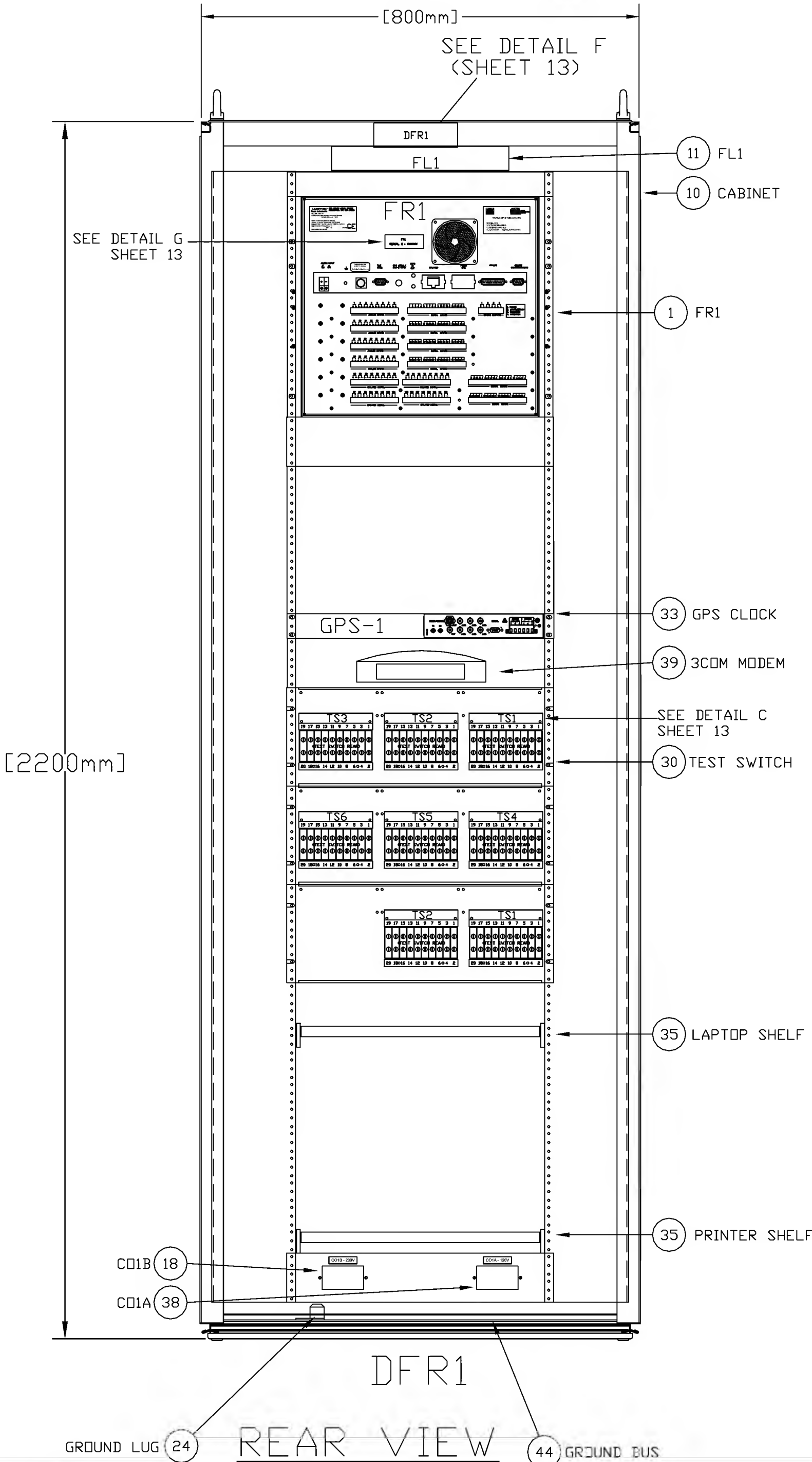
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C

D

E

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NOTES

INSTALLATION NOTES:
1. CUSTOMER WIRING SHOWN DASHED. AMETEK FACTORY WIRING SHOWN SOLID.
2. EACH CABINET IS EQUIPPED WITH 90° DOOR STOPS AND PADLOCK TYPE DOOR HANDLES.
3. THE CABINET IS RATED IP41, WITH FRONT / REAR ACCESS & TOP / BOTTOM CABLE ENTRY.
EXTERIOR FINISH: RAL7038
INTERIOR FINISH: RAL9003

SERVICE NOTES:
1. THE TR-2000 SYSTEM IS WIRED FOR 32 ANALOG AND 128 DIGITAL CHANNELS.
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7. SYSTEM POWER IS 125VDC. THE COURTESY OUTLET, LIGHT AND PRINTER REQUIRE 220VAC. THERE IS ALSO 120VAC OUTLET AVAILABLE.
8. TR-2000 VISUAL STATUS INDICATORS ARE ON THE FRONT OF THE TR-2000. STATUS OUTPUTS ARE WIRED TO X101.
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10. ALL DIMENSIONS ARE IN INCHES [MM].
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AMETEK S.O.# : 11002273-3
AMETEK DRAWING# : D-1105-212
SAITE P.O. # : API-D-0826-06656

REFERENCE DRAWINGS

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DRAWING CONTROL SHEET NUMBER	ED-306014

ISSUED FOR CONSTRUCTION

AS-BUILT BY _____ DATE _____

00 27/01/15 SKT ISSUED FOR CONSTRUCTION MA

REV. NO. DATE BY DESCRIPTION CHKD. CERT. APP'D.

الشركة السعودية للكهرباء
Saudi Electricity Company

DRAWN BY: MA CHECKED BY: _____ SCALE: NONE

DATE STARTED: 28-11-12 DATE COMPLETED: _____

DPR'G. DEPT.: _____ ENG. DEPT.: _____

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CERTIFIED BY: _____ DATE: _____

TR-2200 FAULT RECORDER

TR-2200 SYSTEM REAR VIEW

SEC-ROOM : IBN SINA S/S

JUBAIL SAUDI ARABIA

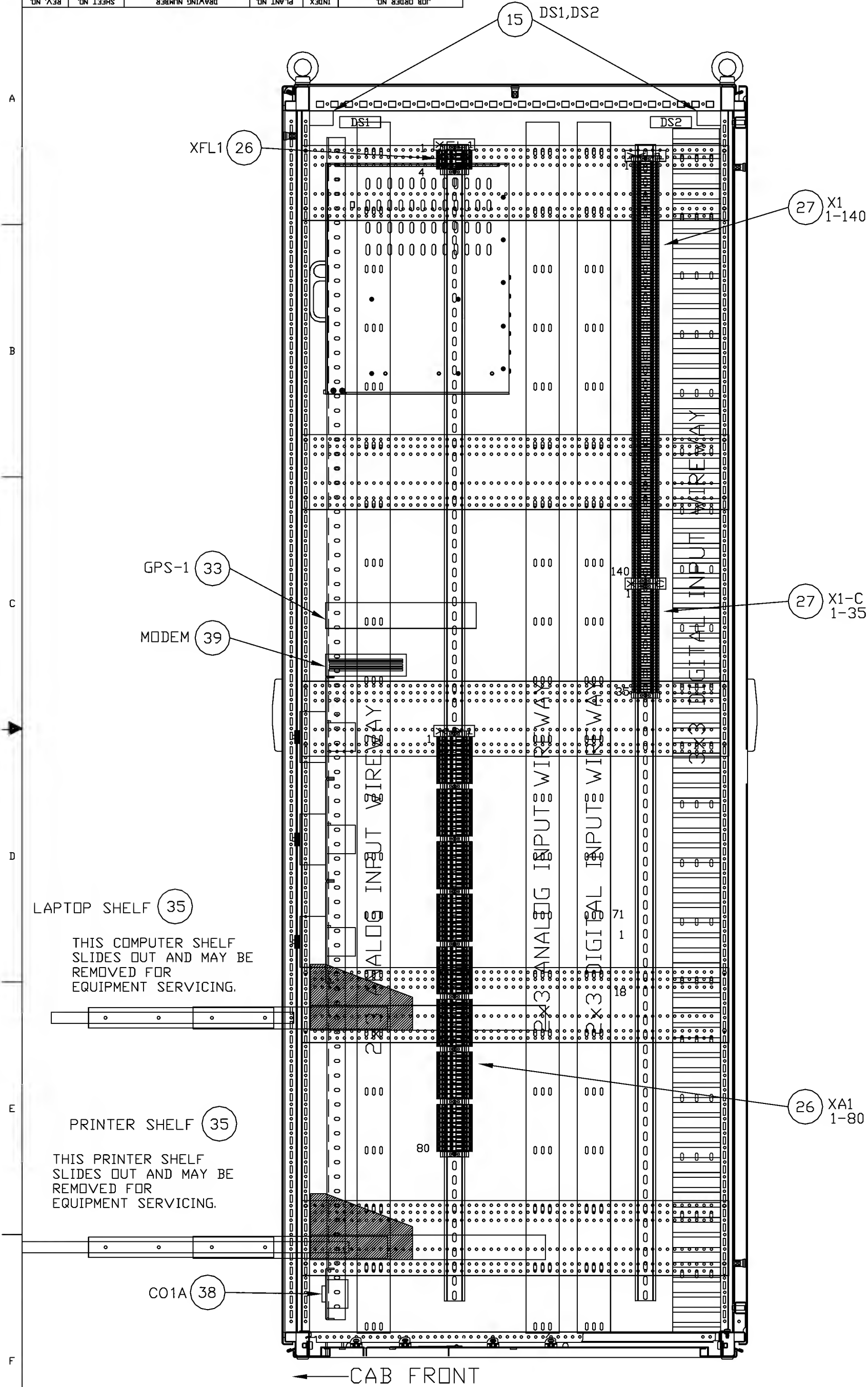
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SEC-ERB CAD-A (2002/04)

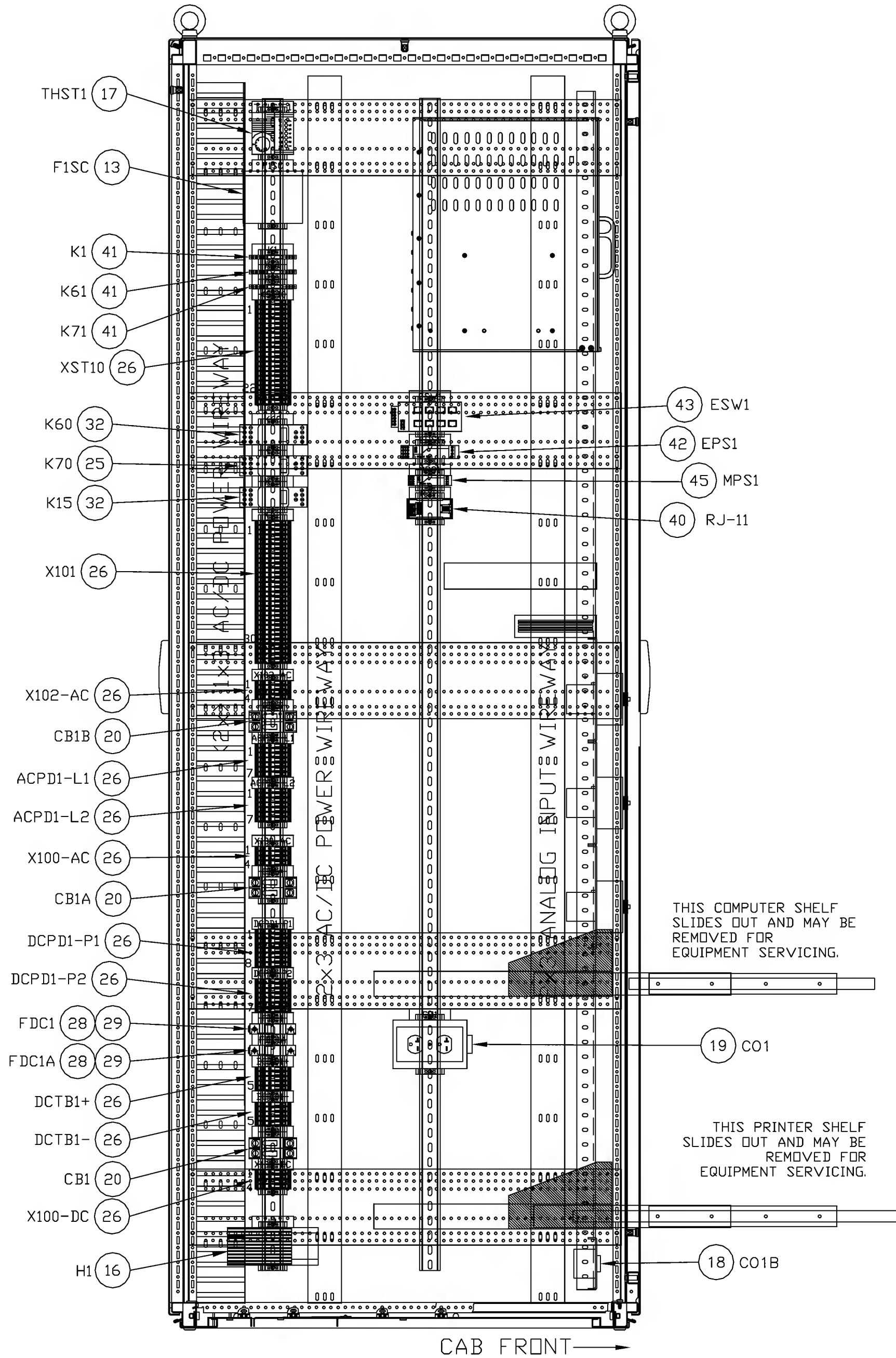
DMS VECTOR Code03

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00	06 of 24	3-1213004	T413	ED-306151	REV. NO.	SHEET NO.	JOB ORDER NO.
00	06 of 24	3-1213004	T413	ED-306151	REV. NO.	SHEET NO.	JOB ORDER NO.



DFR1 SIDE A-A



DFR1 SIDE B-B

- NOTES
- INSTALLATION NOTES:
1. CUSTOMER WIRING SHOWN DASHED. AMETEK FACTORY WIRING SHOWN SOLID.
 2. EACH CABINET IS EQUIPPED WITH 90° DOOR STOPS AND PADLOCK TYPE DOOR HANDLES.
 3. THE CABINET IS RATED IP41, WITH FRONT / REAR ACCESS & TOP / BOTTOM CABLE ENTRY.
- EXTERIOR FINISH: RAL7038
INTERIOR FINISH: RAL9003
- SERVICE NOTES:
1. THE TR-2000 SYSTEM IS WIRED FOR 32 ANALOG AND 128 DIGITAL CHANNELS.
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SAITE P.O. # : API-D-0826-06656

REFERENCE DRAWINGS

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DRAWING CONTROL SHEET NUMBER	ED-306014

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Saudi Electricity Company

DRAWN BY: MA CHECKED BY: _____ SCALE: NONE

DATE STARTED: 28-11-12 DATE COMPLETED: _____

DPR'G. DEPT.: _____ ENG. DEPT.: _____

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TR-2200 FAULT RECORDER

DFR1 SIDE VIEW A-A, B-B

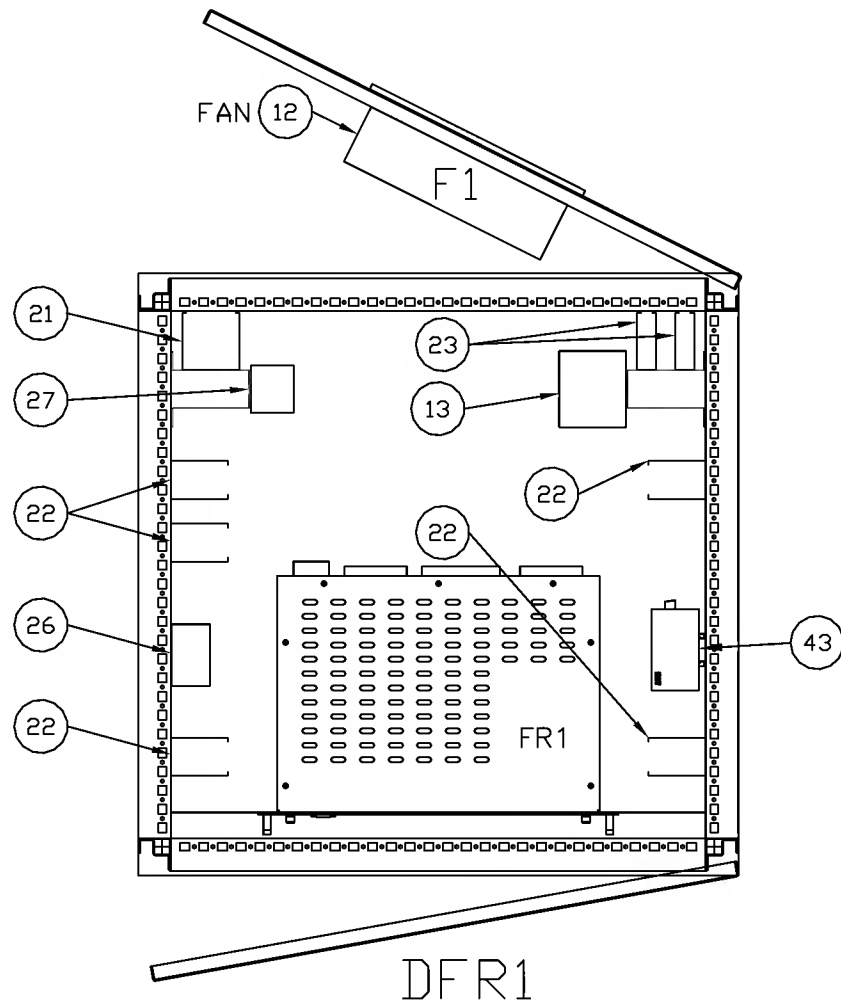
SEC-ROOM : IBN SINA S/S

JUBAIL SAUDI ARABIA

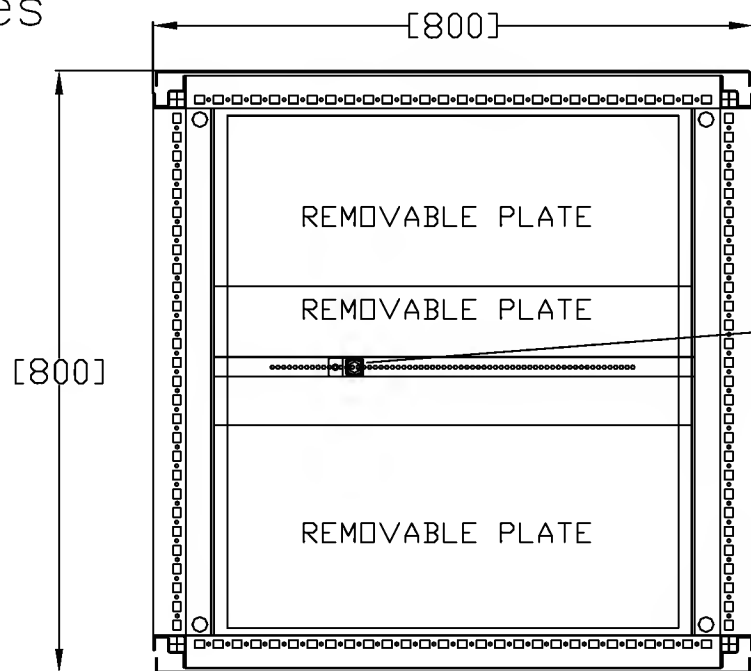
JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
3-1213004	P	T413	ED-306151	06 of 24	00

00	07 of 24	ED-306151	T413	P	3-1213004	JOB ORDER NO.
REV. NO.	SHEET NO.	DRAWING NUMBER	PLANT NO.	INDEX	PLANT NO.	JOB ORDER NO.

TOP VIEW
(TOP COVER REMOVED)

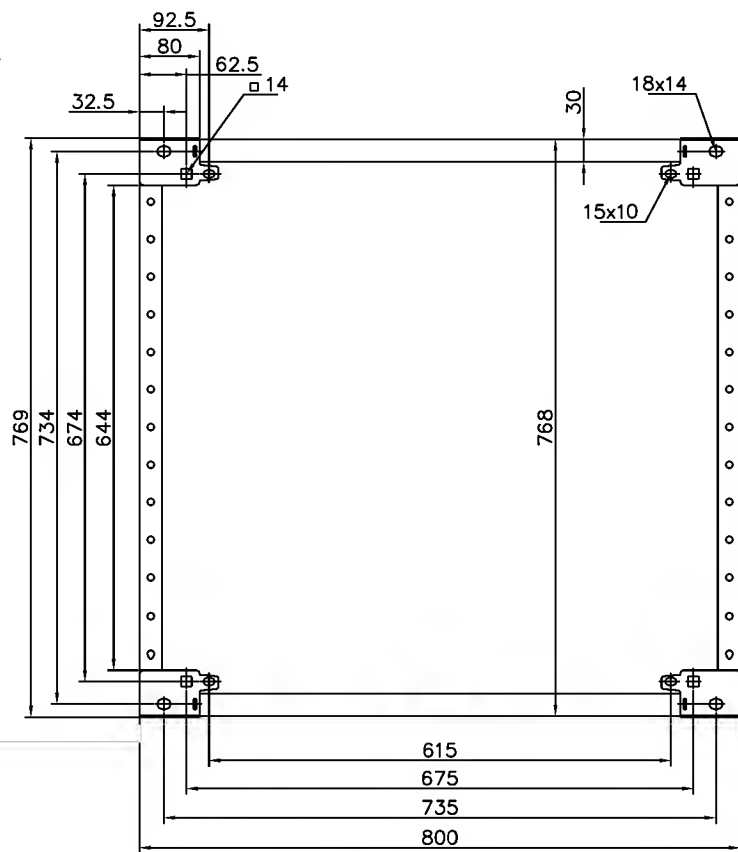


Cabinet Bottom Detail
-removable gland plates



GROUND BUS GB1 (44)
(55) TAPPED HOLES PER BAY
#6-32 SCREWS

Cabinet Channel Base / Mounting Detail



NOTES

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3. THE CABINET IS RATED IP41, WITH FRONT / REAR ACCESS & TOP / BOTTOM CABLE ENTRY.
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INTERIOR FINISH : RAL9003

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TR-2200 FAULT RECORDER

TR2000 SYSTEM TOP / BOTTOM VIEW

SEC-ROOM : IBN SINA S/S

JUBAIL SAUDI ARABIA

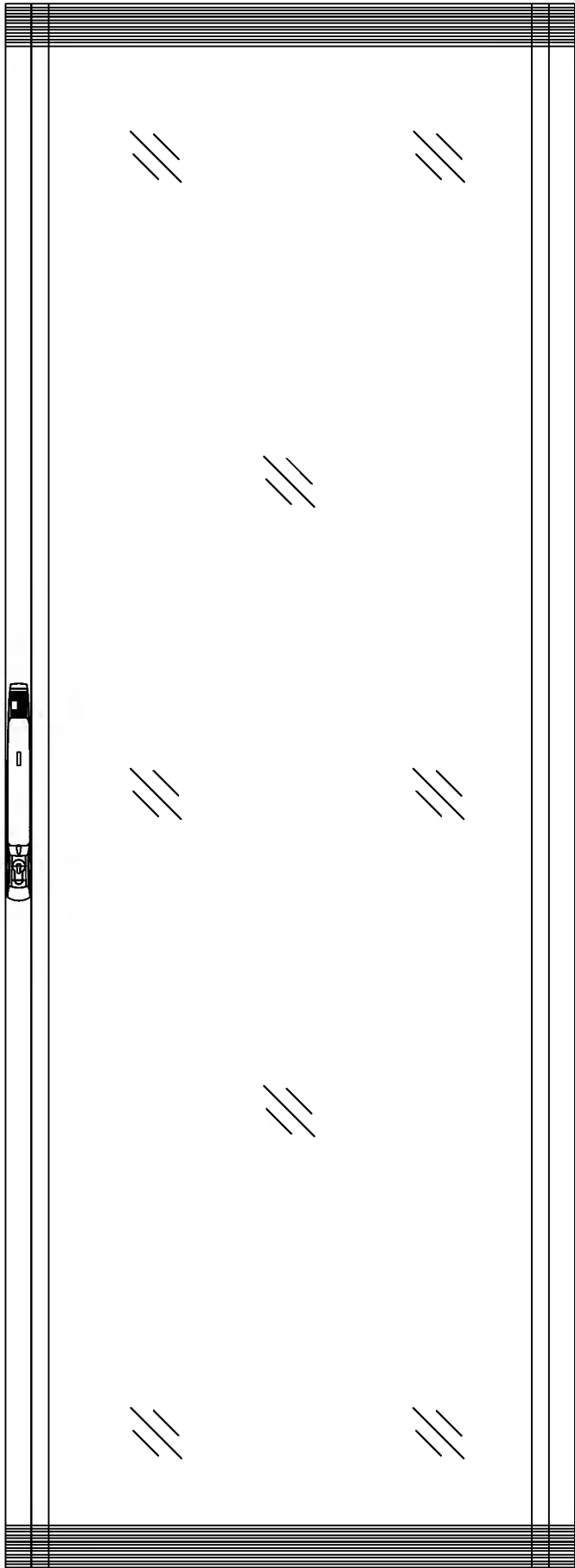
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SEC-ERB CAD-A (2002/04)

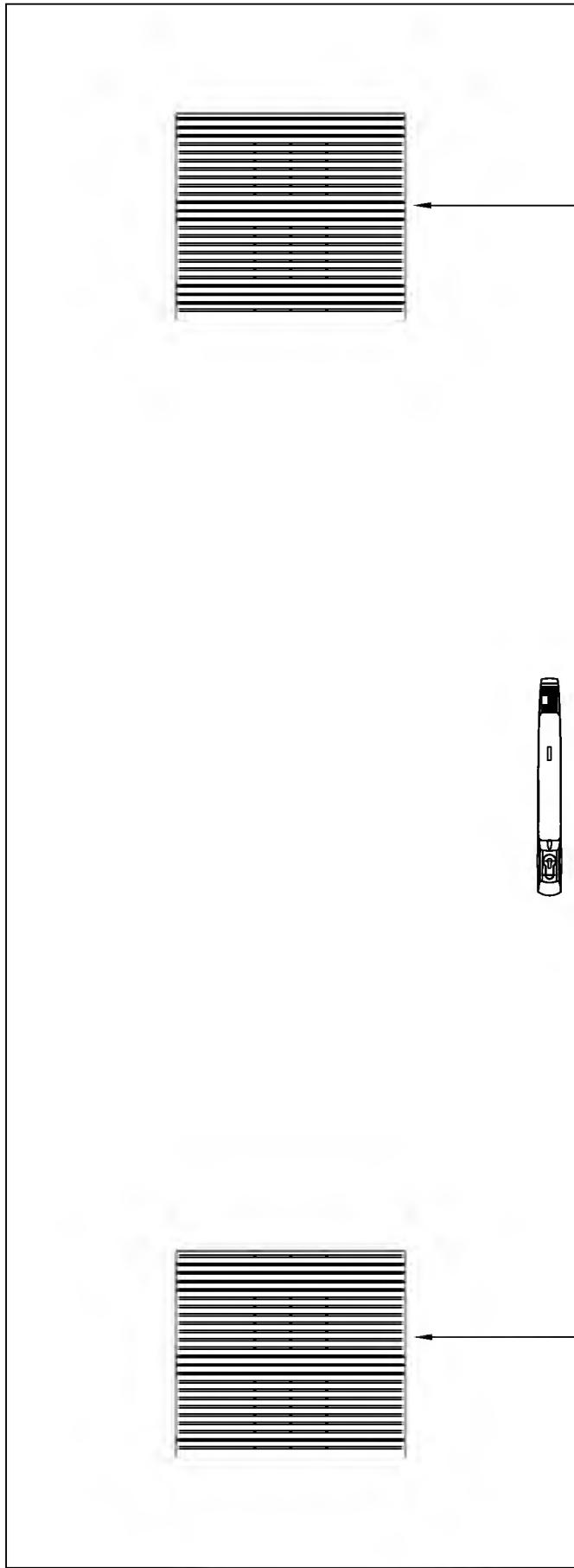
DMS VECTOR Code03

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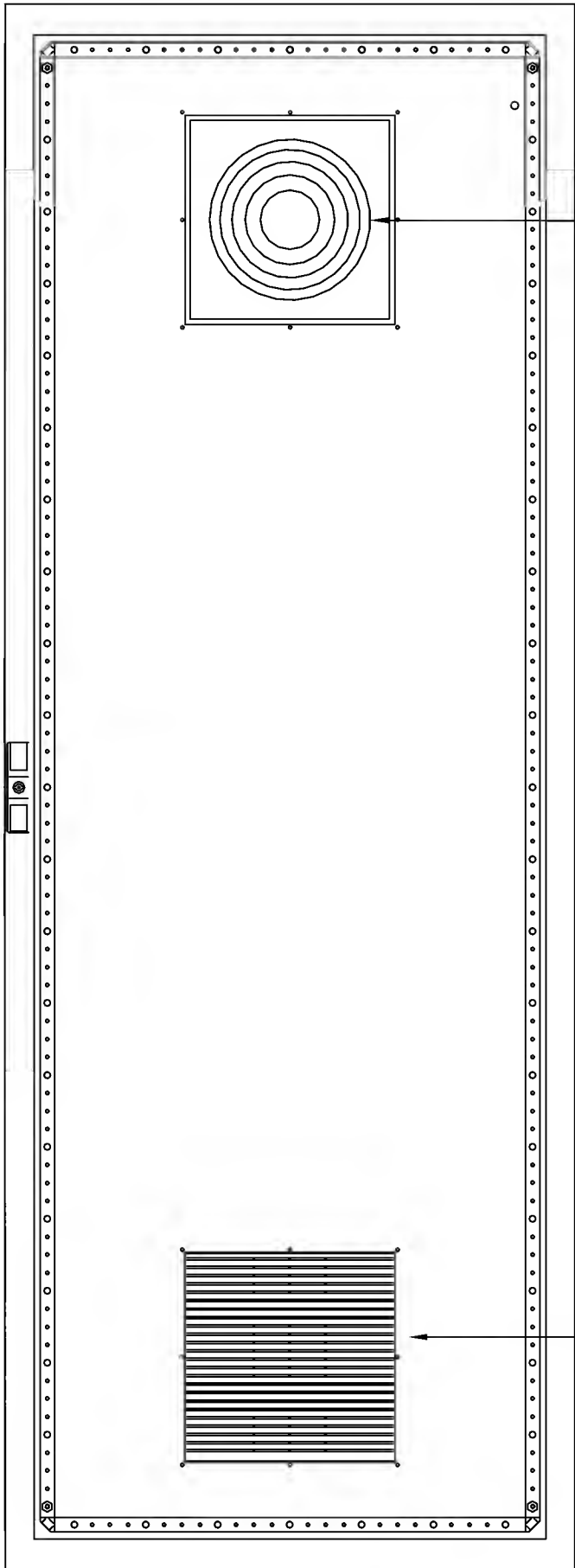
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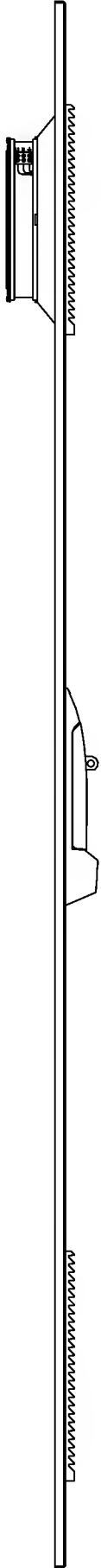
FRONT VIEWING DOOR
- SINGLE-PANE SAFETY GLASS
- EXTRUDED ALUMINUM FRAME
- POWDER COAT FINISH



REAR DOOR
(FRONT VIEW)



REAR DOOR
(REAR VIEW)



REAR DOOR
(SIDE VIEW)

NOTES

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TR-2200 FAULT RECORDER
SYSTEM FRONT / REAR DOOR DETAIL
SEC-ROOM : IBN SINA S/S

JUBAIL SAUDI ARABIA

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09 of 24

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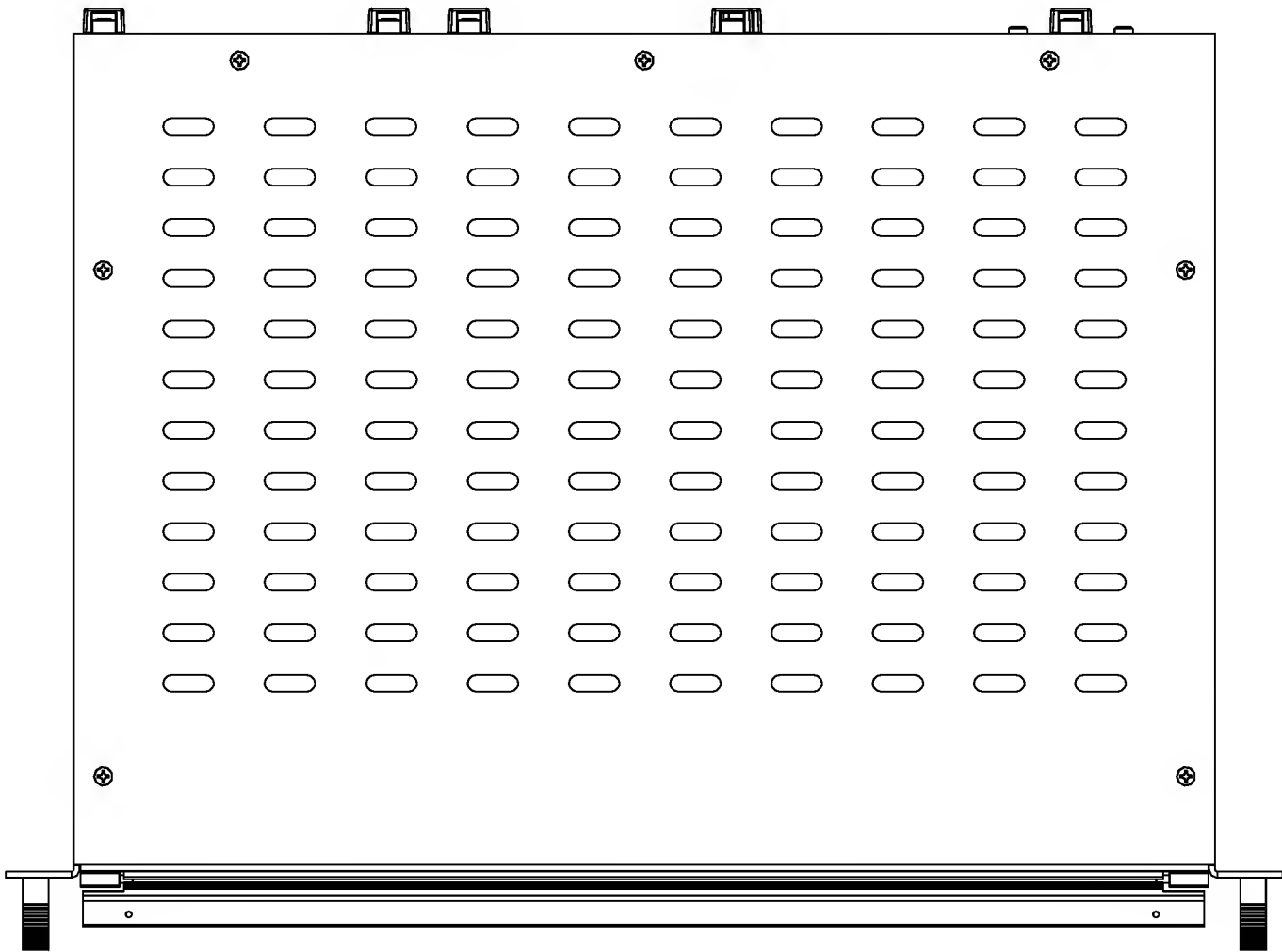
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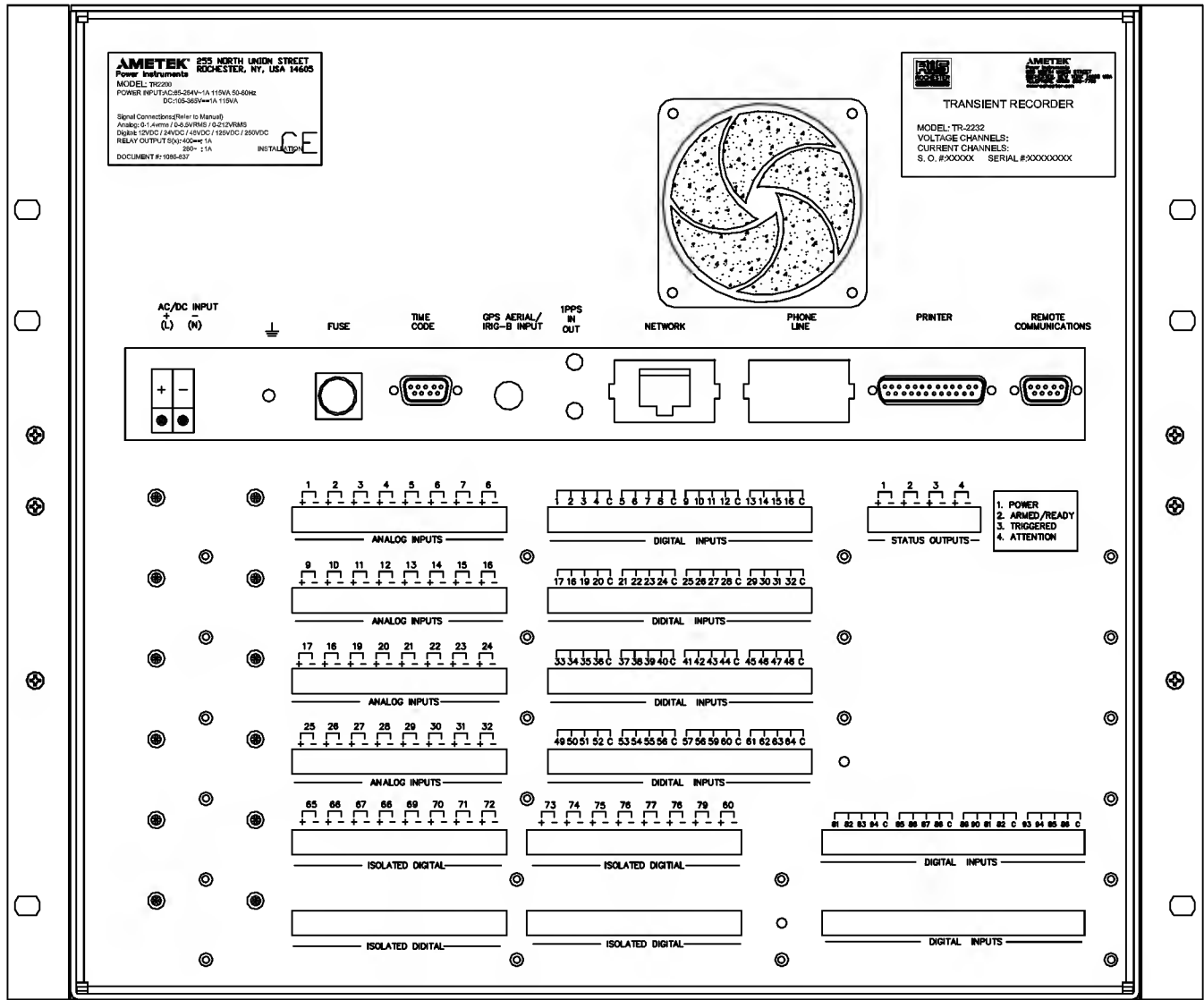
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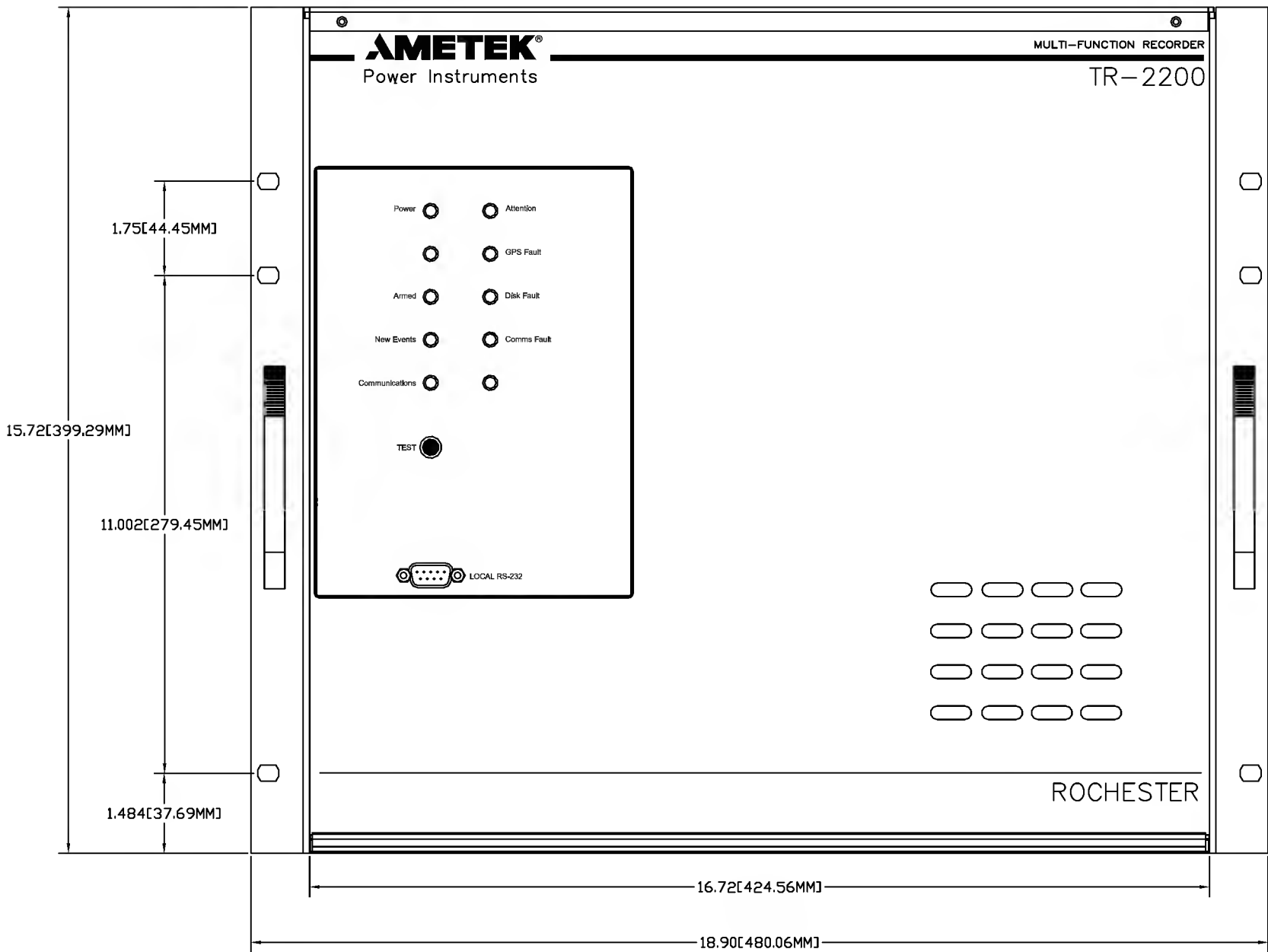
TOP VIEW



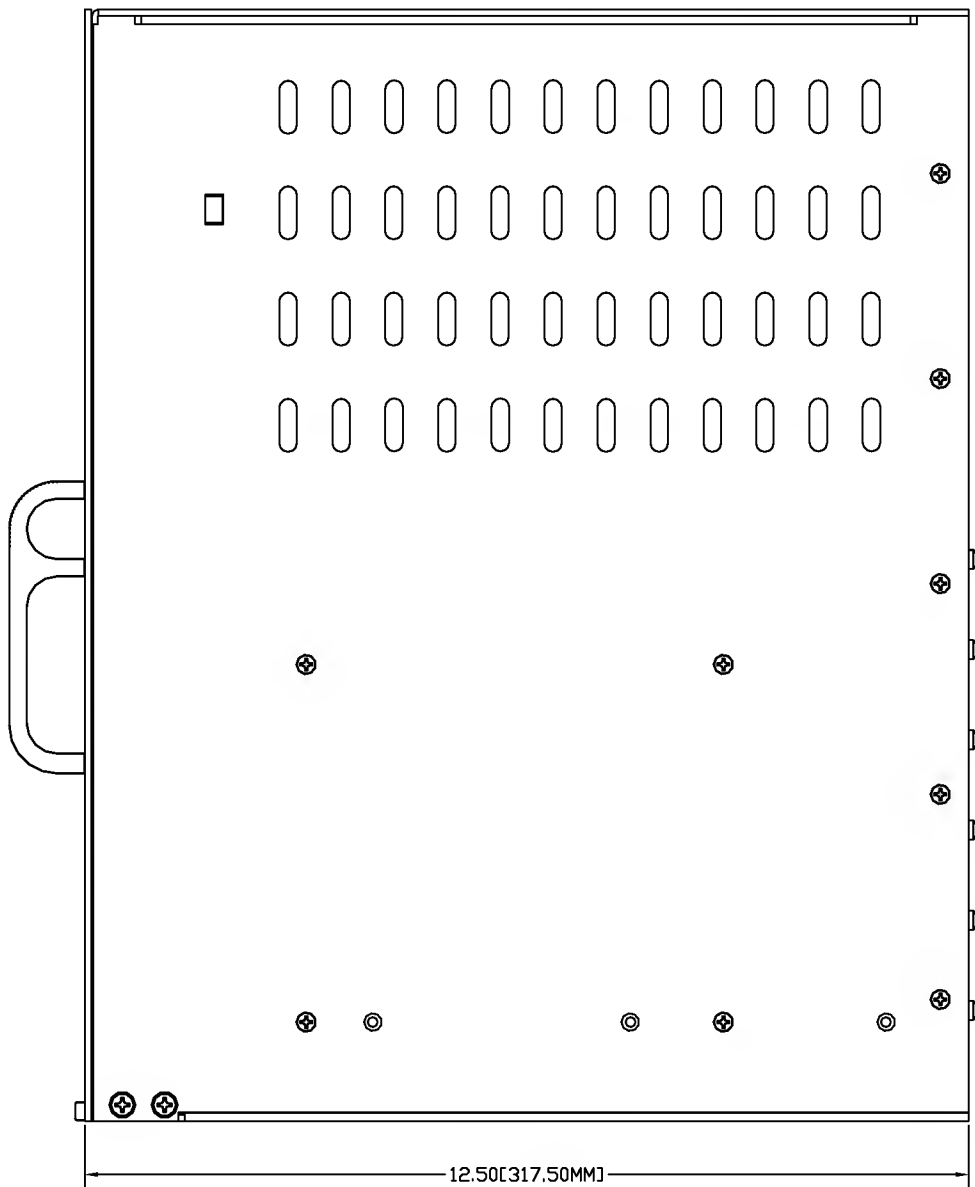
REAR VIEW



FRONT VIEW



SIDE VIEW



NOTES

INSTALLATION NOTES:

1. CUSTOMER WIRING SHOWN DASHED. AMETEK FACTORY WIRING SHOWN SOLID.
2. EACH CABINET IS EQUIPPED WITH 90° DOOR STOPS AND PADLOCK TYPE DOOR HANDLES.
3. THE CABINET IS RATED IP41, WITH FRONT / REAR ACCESS & TOP / BOTTOM CABLE ENTRY.

EXTERIOR FINISH: RAL7038
INTERIOR FINISH : RAL9003

SERVICE NOTES:

1. THE TR-2000 SYSTEM IS WIRED FOR 32 ANALOG AND 128 DIGITAL CHANNELS.
2. THE TR-2000 HAS BEEN CONFIGURED AND CALIBRATED AT THE FACTORY AS FOLLOWS:
CHANNELS VOLTAGE: REF. WIRING
CHANNELS VOLTAGE: REF. WIRING
3. BOTH VOLTAGE INPUT AND CICT OUTPUTS ARE TO BE WIRED TO FT-19R VOLTAGE TEST SWITCHES. THE FULL-SCALE SIGNAL APPLIED TO THE TR-2000 INPUT FOR VOLTAGE CHANNELS IS 300V PEAK AND 2V PEAK FOR CURRENT CHANNELS.
4. CICT'S (CURRENT ISOLATOR CT) ARE PROVIDED LOOSE PIECE FOR CURRENT INPUTS. CICT OUTPUT IS 70.7mVAC (RMS) AT THE RATED NOMINAL INPUT (1A/5A AMPS). FULL-SCALE CURRENT IS 20 TIMES THE NOMINAL VALUE (20/100 AMPS).
5. TO CHANGE A CHANNEL FROM CURRENT TO VOLTAGE OR FROM VOLTAGE TO CURRENT, CHANGE THE JUMPER ON THE INPUT MODULE AND RE-CALIBRATE THE INPUT (REF. TO THE TR-2000 INSTRUCTION MANUAL.)
6. DIGITAL INPUT FIELD CONTACT VOLTAGE IS 125VDC.
7. SYSTEM POWER IS 125VDC. THE COURTESY OUTLET, LIGHT AND PRINTER REQUIRE 220VAC. THERE IS ALSO 120VAC OUTLET AVAILABLE.
8. TR-2000 VISUAL STATUS INDICATORS ARE ON THE FRONT OF THE TR-2000. STATUS OUTPUTS ARE WIRED TO X101.
9. ALL LABELING TAGS SHOWN ARE ENGRAVED LAMACOID, BLACK LETTERING ON WHITE BACKGROUND. REFERENCE PAGE 9 FOR TAG DETAILS.
10. ALL DIMENSIONS ARE IN INCHES [MM].
11. CIRCLED NUMBERS WITH ARROWS INDICATE THE BILL OF MATERIAL REFERENCED ON PG 10.

AMETEK S.O.# : 11002273-3
AMETEK DRAWING# : D-1105-212
SAITE P.O. # : API-D-0826-06656

REFERENCE DRAWINGS	
DRAWING TITLE	DRAWING NO.
DRAWING CONTROL SHEET NUMBER	ED-306014

ISSUED FOR CONSTRUCTION

AS-BUILT BY: DATE:

00 27/01/15 SKT ISSUED FOR CONSTRUCTION MA

REV. NO. DATE BY DESCRIPTION CHKD. CERT. APPD.

الشركة السعودية للكهرباء
Saudi Electricity Company

DRAWN BY: MA CHECKED BY: SCALE: NONE
DATE STARTED: 28-11-12 DATE COMPLETED:
DPR'G. DEPT.: ENG. DEPT.:

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNTIL CERTIFIED AND DATED

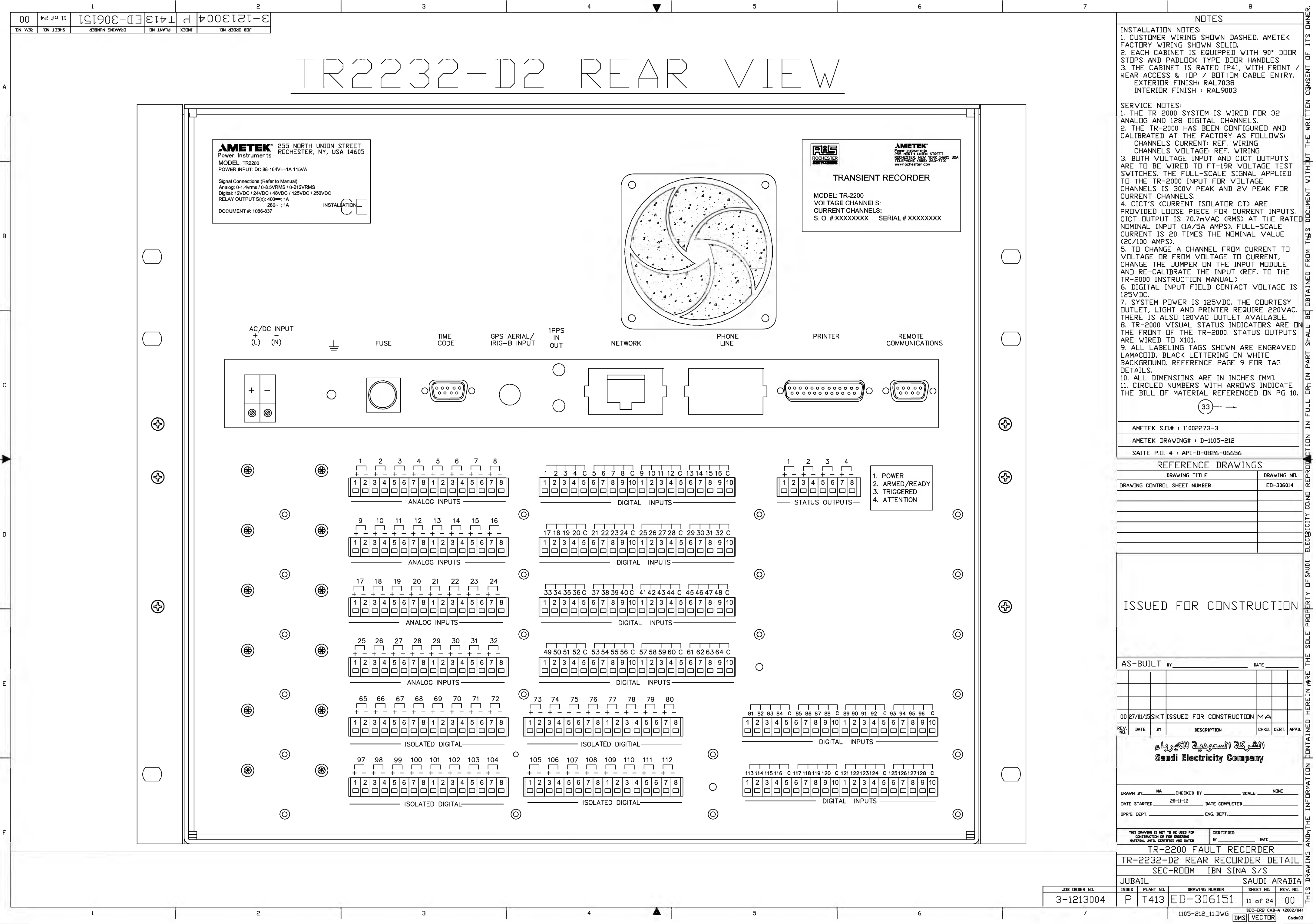
CERTIFIED BY: DATE:

TR-2200 FAULT RECORDER
TR-2232-D2 RECORDER DETAIL
SEC-ROOM : IBN SINA S/S

JUBAIL SAUDI ARABIA

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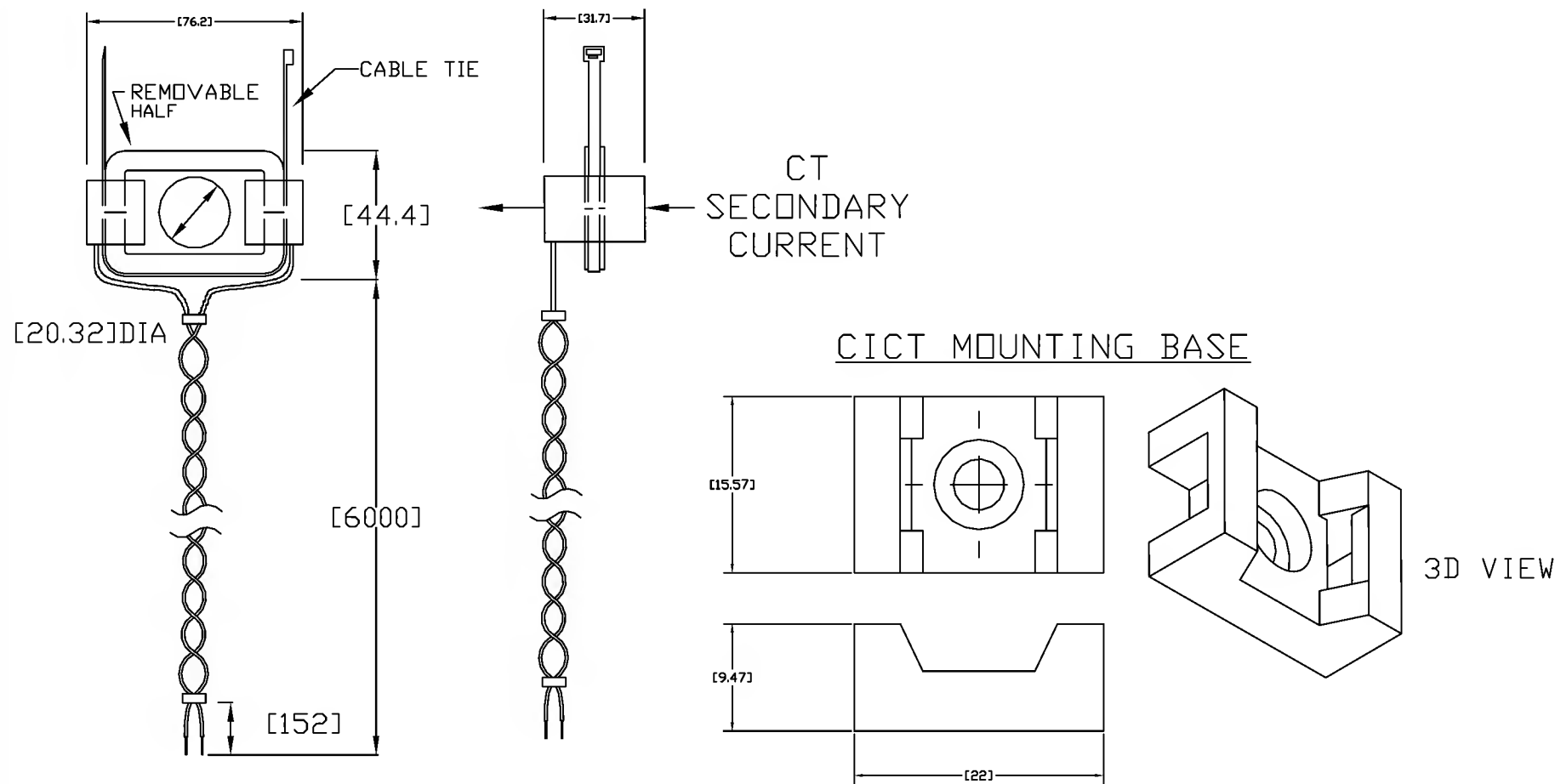
1105-212_10.DWG
SEC-ERB CAD-A (2002/04)
DMS VECTOR Code03



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TYPICAL INPUT CONNECTIONS

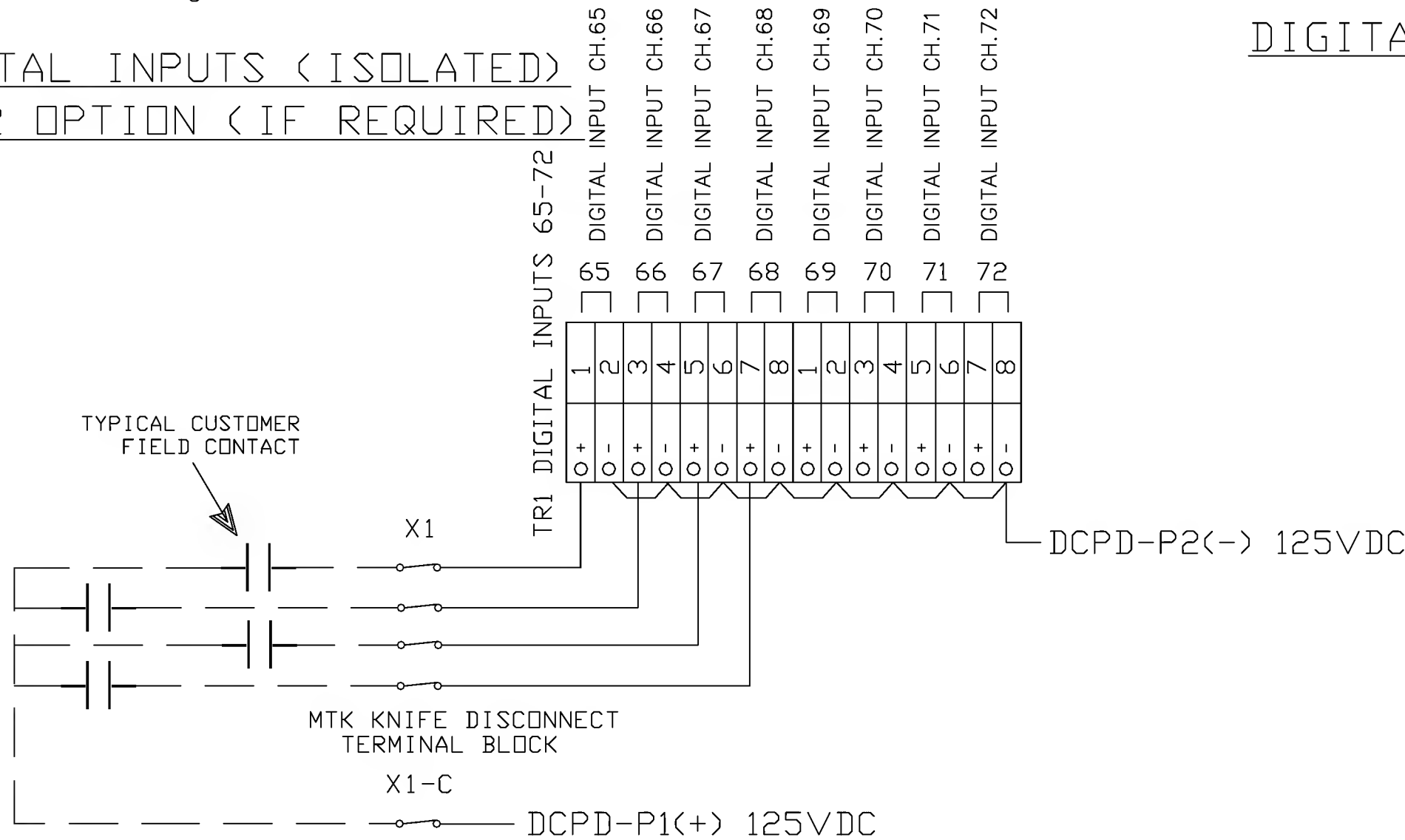
SPLIT CORE Current Isolation Current Transformer (CICT) OUTLINE DRAWING



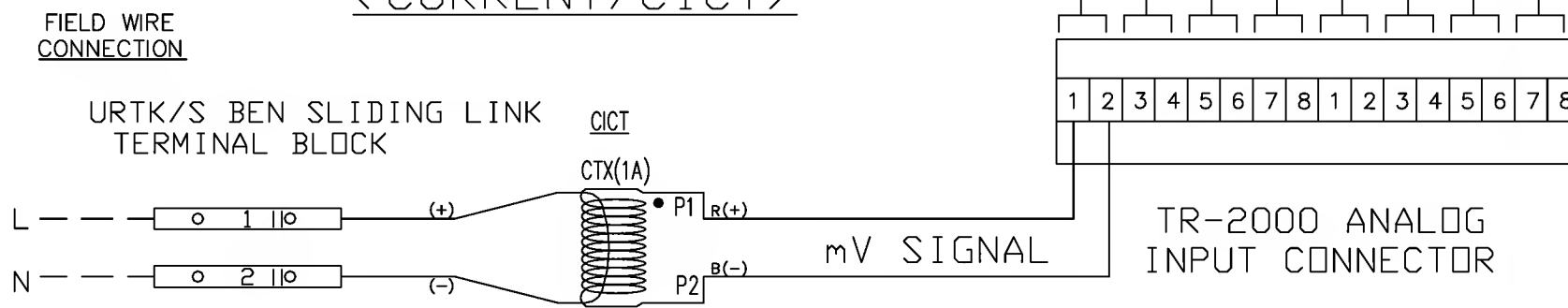
Notes:

1. Appropriate AMETEK P/N and Nominal current will be put on transformer in bold white letters. Markings will be on start side of transformer core (non-removable half) to indicate start of single turn (user-supplied) primary winding. For more detailed operation see A-1064-713.
2. Top half of core is completely removable to allow customer insertion of primary wire (single turn) through core window. A cable tie is provided to secure both halves together for semi permanent mounting.

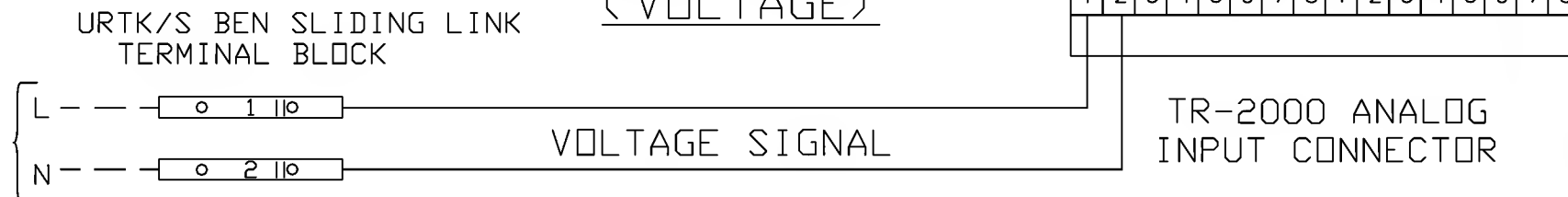
DIGITAL INPUTS (ISOLATED) D1/D2 OPTION (IF REQUIRED)



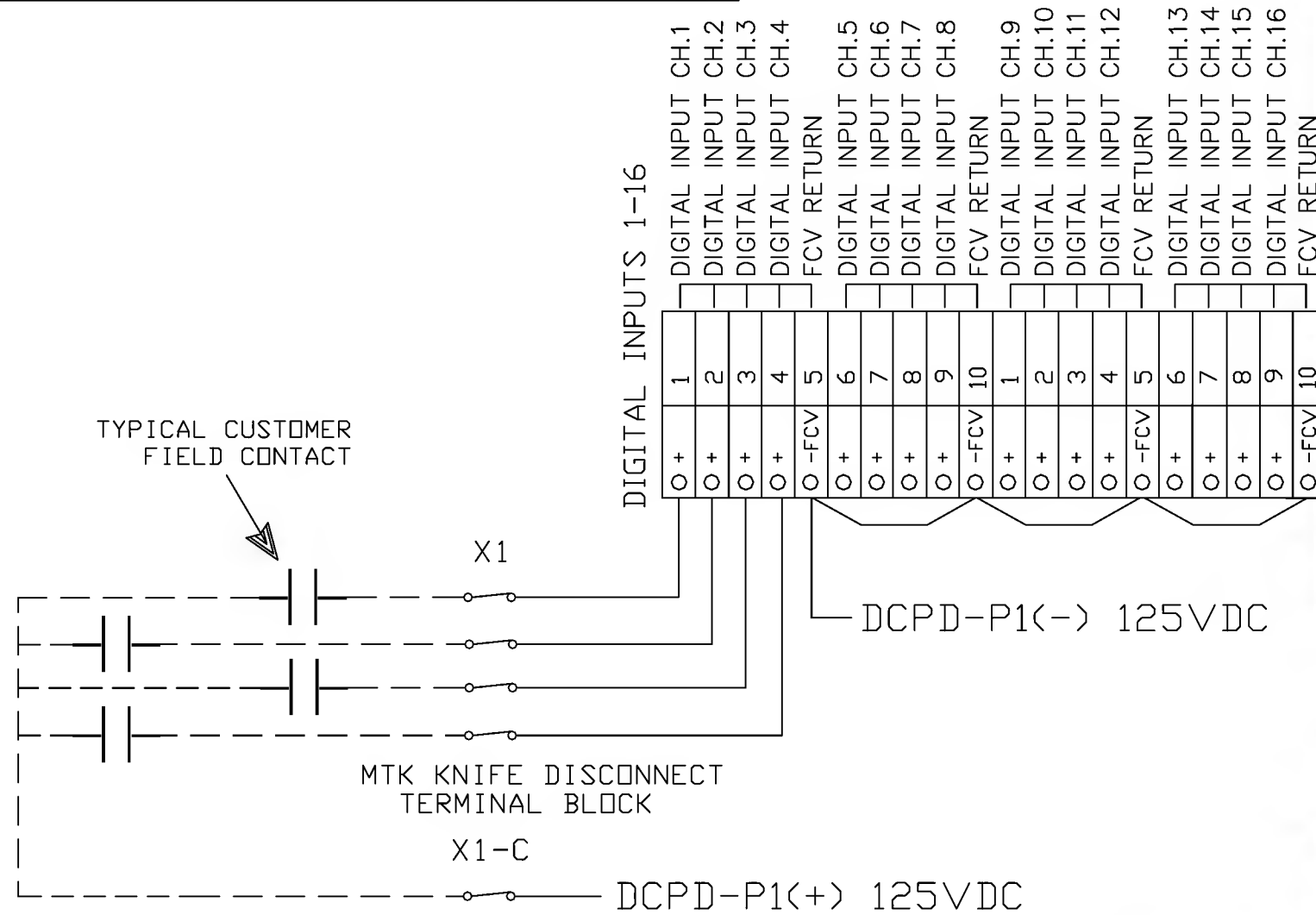
ANALOG INPUTS (CURRENT/CICT)



ANALOG INPUTS (VOLTAGE)



DIGITAL INPUTS (NON-ISOLATED)



NOTES

INSTALLATION NOTES:
1. CUSTOMER WIRING SHOWN DASHED. AMETEK FACTORY WIRING SHOWN SOLID.
2. EACH CABINET IS EQUIPPED WITH 90° DOOR STOPS AND PADLOCK TYPE DOOR HANDLES.
3. THE CABINET IS RATED IP41, WITH FRONT / REAR ACCESS & TOP / BOTTOM CABLE ENTRY.
EXTERIOR FINISH: RAL7038
INTERIOR FINISH: RAL9003

SERVICE NOTES:

1. THE TR-2000 SYSTEM IS WIRED FOR 32 ANALOG AND 128 DIGITAL CHANNELS.
2. THE TR-2000 HAS BEEN CONFIGURED AND CALIBRATED AT THE FACTORY AS FOLLOWS:
CHANNELS CURRENT: REF. WIRING
CHANNELS VOLTAGE: REF. WIRING
3. BOTH VOLTAGE INPUT AND CICT OUTPUTS ARE TO BE WIRED TO FT-19R VOLTAGE TEST SWITCHES. THE FULL-SCALE SIGNAL APPLIED TO THE TR-2000 INPUT FOR VOLTAGE CHANNELS IS 300V PEAK AND 2V PEAK FOR CURRENT CHANNELS.
4. CICT'S (CURRENT ISOLATOR CT) ARE PROVIDED LOOSE PIECE FOR CURRENT INPUTS. CICT OUTPUT IS 70.7mVAC (RMS) AT THE RATED NOMINAL INPUT (1A/5A AMPS). FULL-SCALE CURRENT IS 20 TIMES THE NOMINAL VALUE (20/100 AMPS).
5. TO CHANGE A CHANNEL FROM CURRENT TO VOLTAGE OR FROM VOLTAGE TO CURRENT, CHANGE THE JUMPER ON THE INPUT MODULE AND RE-CALIBRATE THE INPUT (REF. TO THE TR-2000 INSTRUCTION MANUAL.)
6. DIGITAL INPUT FIELD CONTACT VOLTAGE IS 125VDC.
7. SYSTEM POWER IS 125VDC. THE COURTESY OUTLET, LIGHT AND PRINTER REQUIRE 220VAC. THERE IS ALSO 120VAC OUTLET AVAILABLE.
8. TR-2000 VISUAL STATUS INDICATORS ARE ON THE FRONT OF THE TR-2000. STATUS OUTPUTS ARE WIRED TO X101.
9. ALL LABELING TAGS SHOWN ARE ENGRAVED LAMACOID, BLACK LETTERING ON WHITE BACKGROUND. REFERENCE PAGE 9 FOR TAG DETAILS.
10. ALL DIMENSIONS ARE IN INCHES [MM].
11. CIRCLED NUMBERS WITH ARROWS INDICATE THE BILL OF MATERIAL REFERENCED ON PG 10.

33

AMETEK S.O.# : 11002273-3

AMETEK DRAWING# : D-1105-212

SAITE P.O. # : API-D-0826-06656

REFERENCE DRAWINGS

DRAWING TITLE	DRAWING NO.
DRAWING CONTROL SHEET NUMBER	ED-306014

ISSUED FOR CONSTRUCTION

AS-BUILT BY: DATE:

00 27/01/15 SKT ISSUED FOR CONSTRUCTION MA

REV. NO. DATE BY DESCRIPTION CHKD. CERT. APPD.

الشركة السعودية للكهرباء
Saudi Electricity Company

DRAWN BY: MA CHECKED BY: SCALE: NONE

DATE STARTED: 28-11-12 DATE COMPLETED:

OPR'G. DEPT. ENG. DEPT.

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNTIL CERTIFIED AND DATED

CERTIFIED BY: DATE:

TR-2200 FAULT RECORDER

TYPICAL INPUT CONNECTIONS

SEC-ROOM : IBN SINA S/S

JUBAIL SAUDI ARABIA

JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
3-1213004	P	T413	ED-306151	12 of 24	00

1105-212_12.DWG

SEC-ERB CAD-A (2002/04)

DMS VECTOR Code03

1		2		3		4		5		6		7		8	
JOB ORDER NO.		INDEX		PLANT NO.		DRAWING NUMBER		SHEET NO.		REV. NO.		REV. NO.		REV. NO.	
3-1213004		P		T413		ED-306151		14 of 24		00					

A

B

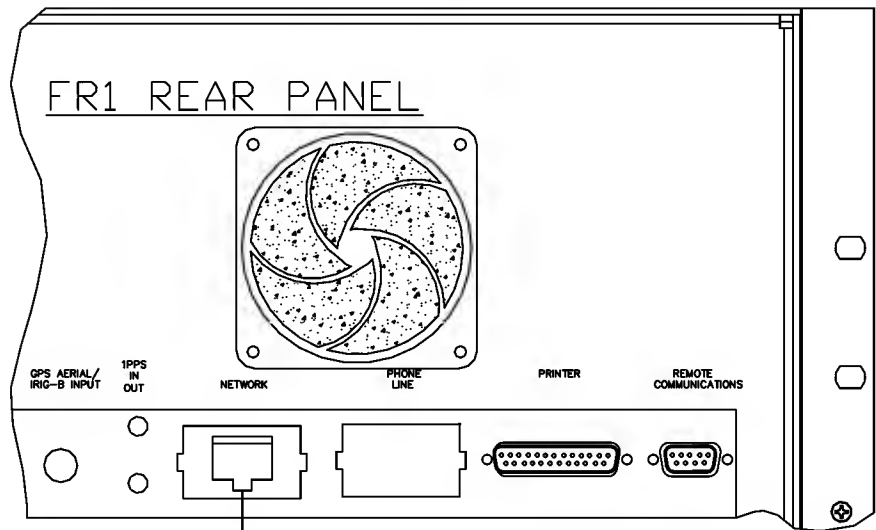
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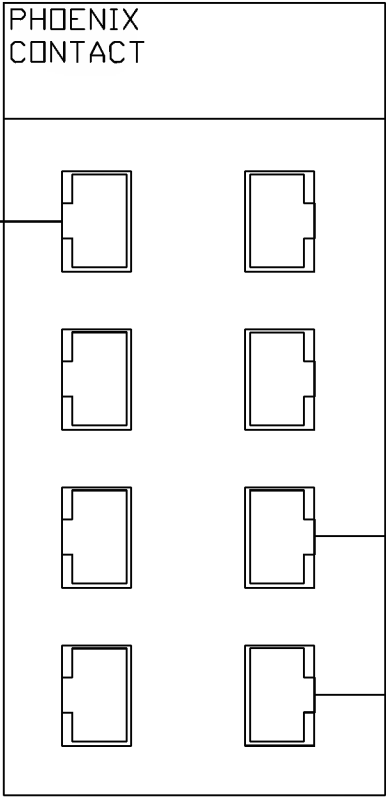
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SYSTEM PERIPHERAL CONNECTIONS (MODEM / ETHERNET / PRINTER)

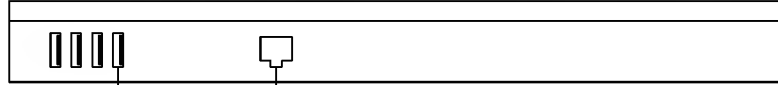


ETHERNET SWITCH
ESW1

LOCATED IN DFR1

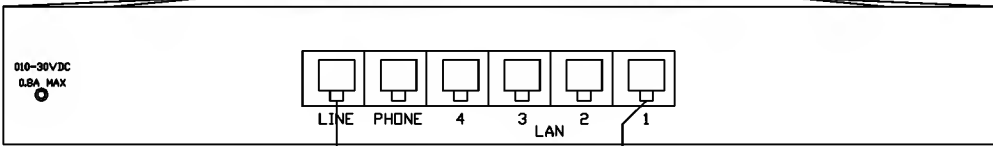


(SAITE PROVIDED)
INFORMATION CAPTURE
LAPTOP COMPUTER



HP
COLOR LASERJET
PRINTER

MODEM
3COM ETHERNET MODEM (REAR VIEW)
LOCATED IN DFR1



RJ-11
TO
SCREW CLAMP
FEED THROUGH MODULE



PHONE
LINE
CONNECTION

NOTES

INSTALLATION NOTES:
1. CUSTOMER WIRING SHOWN DASHED. AMETEK FACTORY WIRING SHOWN SOLID.
2. EACH CABINET IS EQUIPPED WITH 90° DOOR STOPS AND PADLOCK TYPE DOOR HANDLES.
3. THE CABINET IS RATED IP41, WITH FRONT / REAR ACCESS & TOP / BOTTOM CABLE ENTRY.
EXTERIOR FINISH: RAL7038
INTERIOR FINISH: RAL9003

SERVICE NOTES:
1. THE TR-2000 SYSTEM IS WIRED FOR 32 ANALOG AND 128 DIGITAL CHANNELS.
2. THE TR-2000 HAS BEEN CONFIGURED AND CALIBRATED AT THE FACTORY AS FOLLOWS:
CHANNELS CURRENT: REF. WIRING
CHANNELS VOLTAGE: REF. WIRING
3. BOTH VOLTAGE INPUT AND CICT OUTPUTS ARE TO BE WIRED TO FT-19R VOLTAGE TEST SWITCHES. THE FULL-SCALE SIGNAL APPLIED TO THE TR-2000 INPUT FOR VOLTAGE CHANNELS IS 300V PEAK AND 2V PEAK FOR CURRENT CHANNELS.
4. CICT'S (CURRENT ISOLATOR CT) ARE PROVIDED LOOSE PIECE FOR CURRENT INPUTS. CICT OUTPUT IS 70.7mVAC (RMS) AT THE RATED NOMINAL INPUT (1A/5A AMPS). FULL-SCALE CURRENT IS 20 TIMES THE NOMINAL VALUE (20/100 AMPS).
5. TO CHANGE A CHANNEL FROM CURRENT TO VOLTAGE OR FROM VOLTAGE TO CURRENT, CHANGE THE JUMPER ON THE INPUT MODULE AND RE-CALIBRATE THE INPUT (REF. TO THE TR-2000 INSTRUCTION MANUAL.)
6. DIGITAL INPUT FIELD CONTACT VOLTAGE IS 125VDC.
7. SYSTEM POWER IS 125VDC. THE COURTESY OUTLET, LIGHT AND PRINTER REQUIRE 220VAC. THERE IS ALSO 120VAC OUTLET AVAILABLE.
8. TR-2000 VISUAL STATUS INDICATORS ARE ON THE FRONT OF THE TR-2000. STATUS OUTPUTS ARE WIRED TO X101.
9. ALL LABELING TAGS SHOWN ARE ENGRAVED LAMACOID, BLACK LETTERING ON WHITE BACKGROUND. REFERENCE PAGE 9 FOR TAG DETAILS.
10. ALL DIMENSIONS ARE IN INCHES [MM].
11. CIRCLED NUMBERS WITH ARROWS INDICATE THE BILL OF MATERIAL REFERENCED ON PG 10.

33

AMETEK S.O.# : 11002273-3

AMETEK DRAWING# : D-1105-212

SAITE P.O. # : API-D-0826-06656

REFERENCE DRAWINGS

DRAWING TITLE	DRAWING NO.
DRAWING CONTROL SHEET NUMBER	ED-306014

ISSUED FOR CONSTRUCTION

AS-BUILT BY: DATE:

00 27/01/15 SKT ISSUED FOR CONSTRUCTION MA

REV. NO. DATE BY DESCRIPTION CHKD. CERT. APPD.

الشركة السعودية للكهرباء
Saudi Electricity Company

DRAWN BY: MA CHECKED BY: SCALE: NONE
DATE STARTED: 28-11-12 DATE COMPLETED:
DPR'G. DEPT.: ENG. DEPT.:

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNTIL CERTIFIED AND DATED

CERTIFIED BY: DATE:

TR-2200 FAULT RECORDER

SYSTEM PERIPHERAL CONNECTIONS

SEC-ROOM : IBN SINA S/S

JUBAIL SAUDI ARABIA

JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
3-1213004	P	T413	ED-306151	14 of 24	00

1105-212_14.DWG

SEC-ERB CAD-A (2002/04)

DMS VECTOR Code03

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1	2	3	4	5	6	7	8
JOB ORDER NO.	3-1213004	INDEX	P	PLANT NO.	T413	DRAWING NUMBER	ED-306151
REV. NO.	15 of 24	00					

A

B

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D

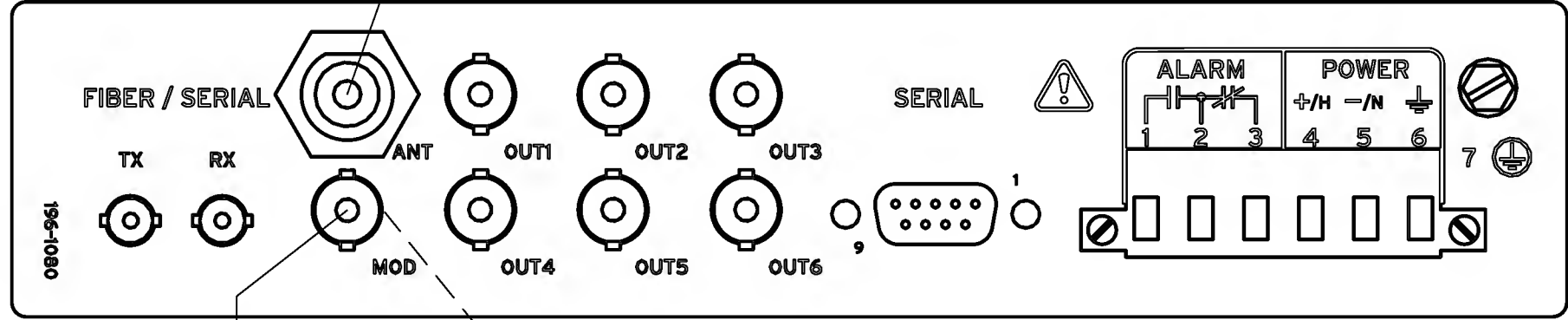
E

F

SYSTEM PERIPHERAL CONNECTIONS

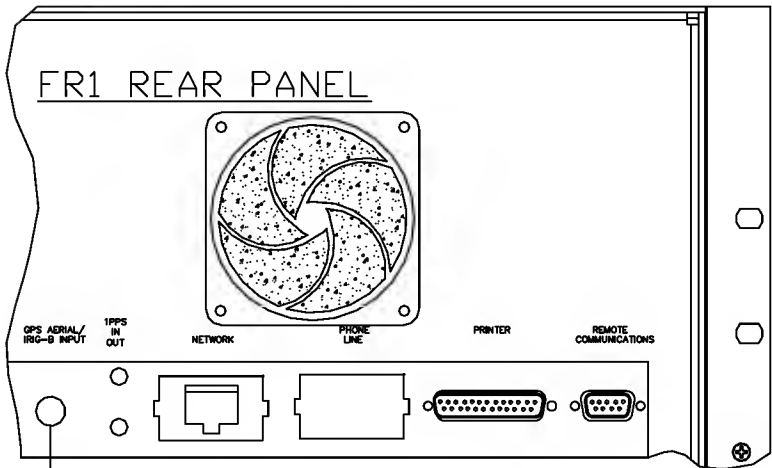
SEL 2407 GPS RECEIVER VIEW LOCATED IN DFR1

GPS-1



GPS
ANTENNA

150 ft RG-6 type cable
(max. 150ft)



NOTE: ANTENNA SHALL BE INSTALLED
OUTSIDE OF THE CONTROL ROOM

NOTES

INSTALLATION NOTES:
1. CUSTOMER WIRING SHOWN DASHED. AMETEK FACTORY WIRING SHOWN SOLID.
2. EACH CABINET IS EQUIPPED WITH 90° DOOR STOPS AND PADLOCK TYPE DOOR HANDLES.
3. THE CABINET IS RATED IP41, WITH FRONT / REAR ACCESS & TOP / BOTTOM CABLE ENTRY.
EXTERIOR FINISH: RAL7038
INTERIOR FINISH : RAL9003

SERVICE NOTES:
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10. ALL DIMENSIONS ARE IN INCHES [MM].
11. CIRCLED NUMBERS WITH ARROWS INDICATE THE BILL OF MATERIAL REFERENCED ON PG 10.

33

AMETEK S.O.# : 11002273-3

AMETEK DRAWING# : D-1105-212

SAITE P.O. # : API-D-0826-06656

REFERENCE DRAWINGS

DRAWING TITLE	DRAWING NO.
DRAWING CONTROL SHEET NUMBER	ED-306014

ISSUED FOR CONSTRUCTION

AS-BUILT BY _____ DATE _____

00 27/01/15 SKT ISSUED FOR CONSTRUCTION MA

REV. NO. DATE BY DESCRIPTION CHKD. CERT. APP'D.

الشركة السعودية للكهرباء
Saudi Electricity Company

DRAWN BY: MA CHECKED BY: SCALE: NONE
DATE STARTED: 28-11-12 DATE COMPLETED:
DPR'G. DEPT.: ENG. DEPT.:

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNTIL CERTIFIED AND DATED

CERTIFIED BY: DATE:

TR-2200 FAULT RECORDER

GPS / IRIG-B INPUT, FR1

SEC-ROOM : IBN SINA S/S

JUBAIL SAUDI ARABIA

JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
3-1213004	P	T413	ED-306151	15 of 24	00

1105-212_15.DWG

SEC-ERB CAD-A (2002/04)

DMS VECTOR Code03

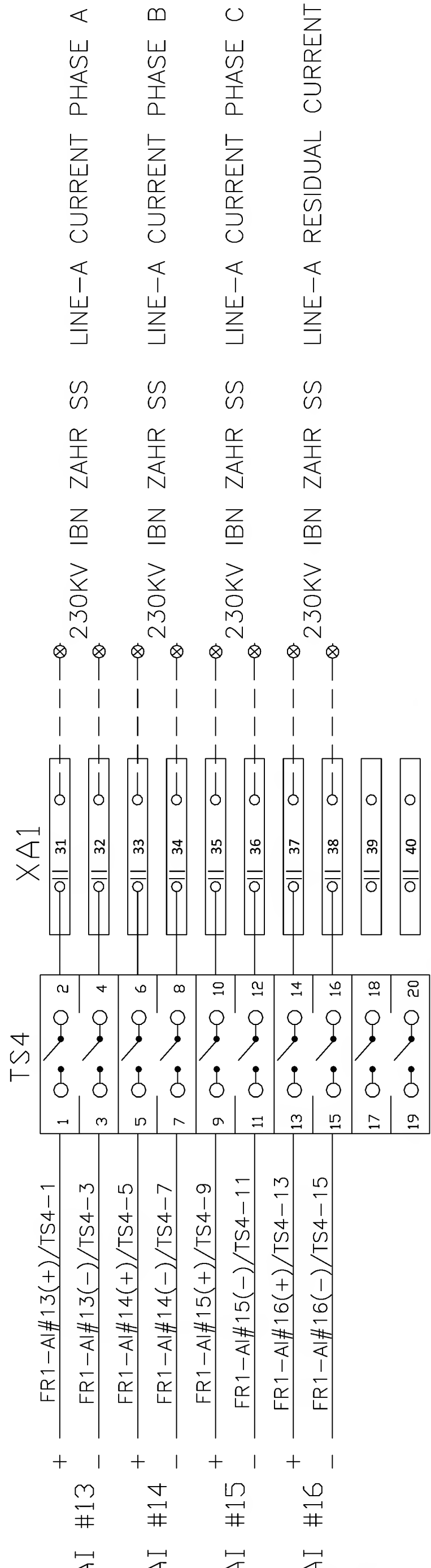
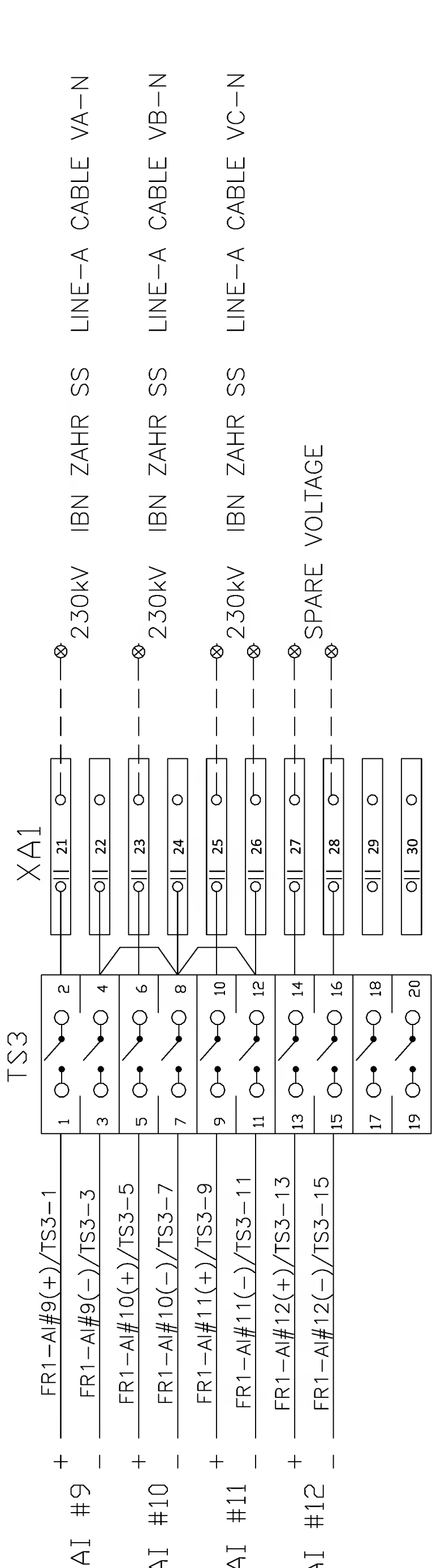
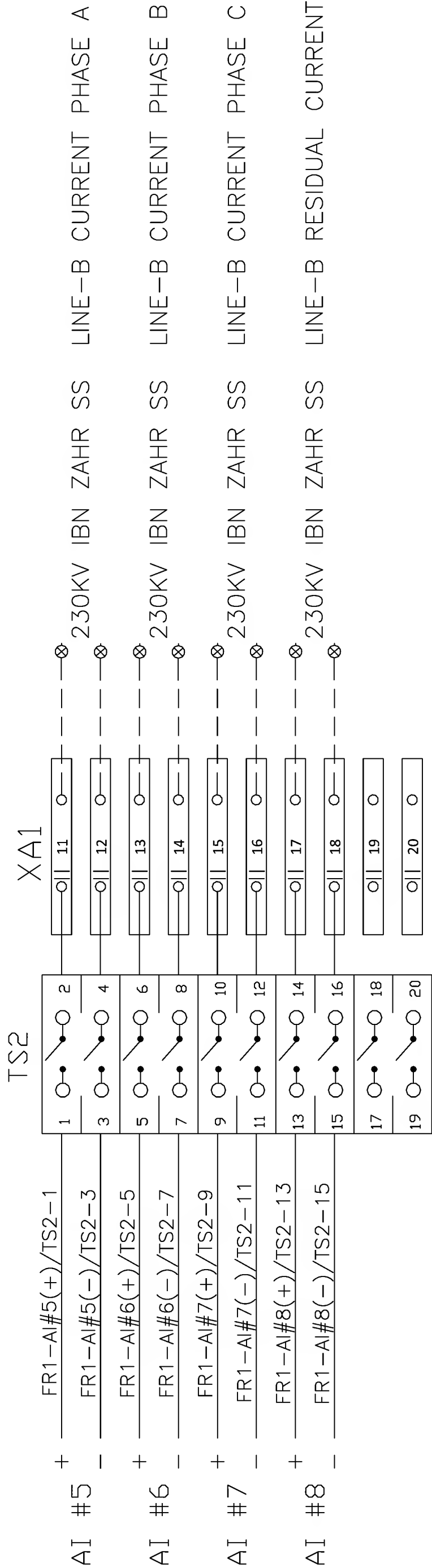
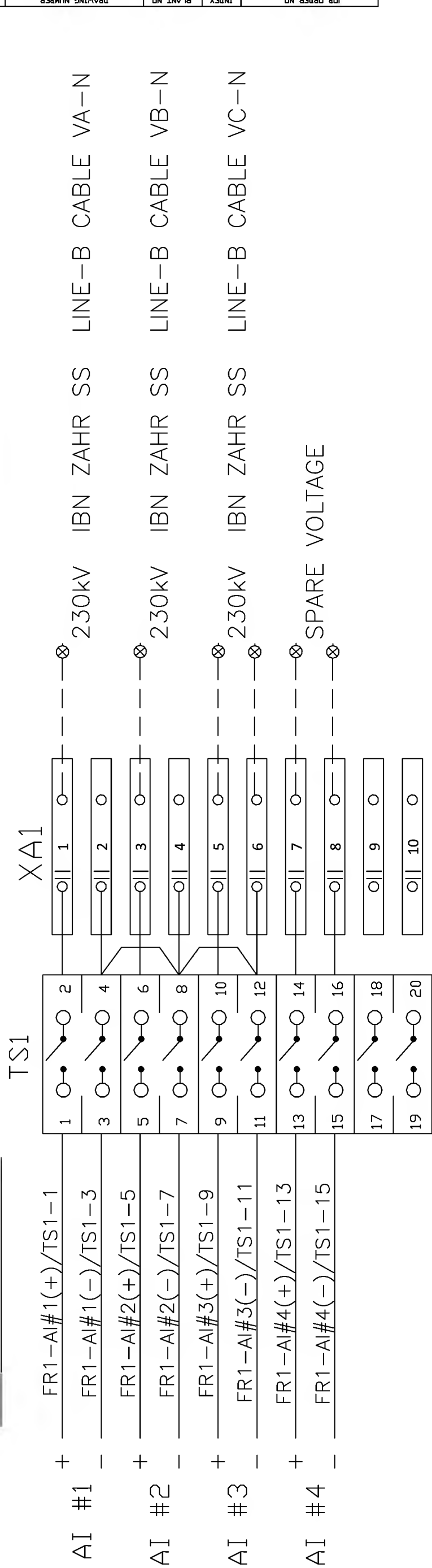
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ANALOG INPUTS

WIRE MARKER

FIELD CONNECTIONS

JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
3-1213004	P	T413	ED-306151	16 of 24	00



NOTE : ABB FT-1 TYPE TEST SWITCH

JUBAIL SAUDI ARABIA					
JOB ORDER NO.		INDEX		PLANT NO.	
3-1213004		P		T413	
DRAWING NUMBER		SHEET NO.		REV. NO.	
ED-306151		16 of 24		00	
SEC-ERB CAD-A (2002/04)					
1105-212_16.DWG					
DMS VECTOR					
Code03					
THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF SAUDI ELECTRICITY CO. NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.					
AS-BUILT BY _____ DATE _____					
REV. DATE BY DESCRIPTION CHKD. CERT. APPD.					
00 27/01/15 SKT ISSUED FOR CONSTRUCTION MA					
الشركة السعودية للكهرباء Saudi Electricity Company					
DRAWN BY: MA CHECKED BY: _____ SCALE: NONE					
DATE STARTED: 28-11-12 DATE COMPLETED: _____					
DPR'G. DEPT. _____ ENG. DEPT. _____					
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNTIL CERTIFIED AND DATED					
CERTIFIED BY: _____ DATE: _____					
TR-2200 FAULT RECORDER					
FR1 ANALOG INPUTS 1-16 WIRING					
SEC-ROOM : IBN SINA S/S					
NOTES					
GENERAL NOTES: 1. 24 CICT'S ARE RATED 1 AMP NOMINAL CURRENT. CICT'S ARE SUPPLIED LOOSE & MOUNTED REMOTELY. 2. DIGITAL INPUT FIELD CONTACT VOLTAGE IS 125VDC AND IS DISTRIBUTED ON X1-C. 3. LABEL NOTES: AI REFERS TO ANALOG INPUT DI REFERS TO DIGITAL INPUT R REFERS TO RED Y REFERS TO YELLOW BLU REFERS TO BLUE BLK REFERS TO BLACK G REFERS TO GRAY 4. WIRE MARKERS ARE LOCATED AT BOTH ENDS OF EVERY WIRE DESIGNATING WIRE ORIGIN AND DESTINATION. WIRE MARKERS ARE HEAT SHRINK TYPE. 5. WIRE AT THE REAR OF THE RECORDER AND THE PHOENIX TERMINAL BLOCKS ARE TERMINATED WITH TERMINAL PIN LUGS. 6. ALL DIGITAL WIRING IS 18AWG 600V PVC TYPE WIRE. ALL ANALOG WIRING IS 18AWG 600V PVC TYPE WIRE. ALL 15 AMP POWER DISTRIBUTION WIRING IS 14AWG 600V PVC TYPE WIRE. ALL 3AMP POWER DISTRIBUTION WIRING IS 18AWG 600V PVC TYPE WIRE. 7. WIRING THAT IS CONTINUED ON ANOTHER SHEET IS DENOTED WITH THE SHEET NUMBER AND LOCATION IN A HEXAGON AS FOLLOWS: 8. PRIMARY FAN(F1) ARE CONTROLLED BY F1SC SPEED CONTROLLER SET TO ATTAIN FULL SPEED WHEN THE TEMPERATURE REACHES 40°C.					

DIGITAL INPUTS

WIRE MARKER

PHOENIX MTK TB

FIELD CONNECTIONS

A

B

C

D

E

F

DWG. NO. ,SHT:

FR1DI-33(+)	FR1DI-33/X1-33	G	33	○	33	○	SPARE	○
FR1DI-34(+)	FR1DI-34/X1-34	G	34	○	34	○	SPARE	○
FR1DI-35(+)	FR1DI-35/X1-35	G	35	○	35	○	SPARE	○
FR1DI-36(+)	FR1DI-36/X1-36	G	36	○	36	○	SPARE	○
FR1DI-37(+)	FR1DI-37/X1-37	G	37	○	37	○	SPARE	○
FR1DI-38(+)	FR1DI-38/X1-38	G	38	○	38	○	230 KV IBN ZAHR LINE-A RELAY SET-1 TRIP	○
FR1DI-39(+)	FR1DI-39/X1-39	G	39	○	39	○	230 KV IBN ZAHR LINE-A RELAY SET-1 DIST XMIT	○
FR1DI-40(+)	FR1DI-40/X1-40	G	40	○	40	○	230 KV IBN ZAHR LINE-A RELAY SET-1 DIST REC	○
FR1DI-41(+)	FR1DI-41/X1-41	G	41	○	41	○	230 KV IBN ZAHR LINE-A RELAY SET-1 21/67N FORWARD START	○
FR1DI-42(+)	FR1DI-42/X1-42	G	42	○	42	○	230 KV IBN ZAHR LINE-A RELAY SET-1 21/67N BACKWARD START	○
FR1DI-43(+)	FR1DI-43/X1-43	G	43	○	43	○	230 KV IBN ZAHR LINE-A RELAY SET-1 DEF XMIT	○
FR1DI-44(+)	FR1DI-44/X1-44	G	44	○	44	○	230 KV IBN ZAHR LINE-A RELAY SET-1 DEF REC	○
FR1DI-45(+)	FR1DI-45/X1-45	G	45	○	45	○	230 KV IBN ZAHR LINE-A RELAY SET-1 BKR FAIL CH 1 REC	○
FR1DI-46(+)	FR1DI-46/X1-46	G	46	○	46	○	230 KV IBN ZAHR LINE-A RELAY SET-2 TRIP	○
FR1DI-47(+)	FR1DI-47/X1-47	G	47	○	47	○	230 KV IBN ZAHR LINE-A RELAY SET-2 DIST XMIT	○
FR1DI-48(+)	FR1DI-48/X1-48	G	48	○	48	○	230 KV IBN ZAHR LINE-A RELAY SET-2 DIST REC	○
FR1DI-49(+)	FR1DI-49/X1-49	G	49	○	49	○	230 KV IBN ZAHR LINE-A RELAY SET-2 21/67N FORWARD START	○
FR1DI-50(+)	FR1DI-50/X1-50	G	50	○	50	○	230 KV IBN ZAHR LINE-A RELAY SET-2 21/67N BACKWARD START	○
FR1DI-51(+)	FR1DI-51/X1-51	G	51	○	51	○	230 KV IBN ZAHR LINE-A RELAY SET-2 DEF XMIT	○
FR1DI-52(+)	FR1DI-52/X1-52	G	52	○	52	○	CROSS TRIGGER	○
FR1DI-53(+)	FR1DI-53/X1-53	G	53	○	53	○	230 KV IBN ZAHR LINE-A RELAY SET-2 DEF REC	○
FR1DI-54(+)	FR1DI-54/X1-54	G	54	○	54	○	230 KV IBN ZAHR LINE-A RELAY SET-2 BKR FAIL CH 2 REC	○
FR1DI-55(+)	FR1DI-55/X1-55	G	55	○	55	○	230 KV IBN ZAHR LINE-A PD TRIP CH 1 REC	○
FR1DI-56(+)	FR1DI-56/X1-56	G	56	○	56	○	230 KV IBN ZAHR LINE-A PD TRIP CH 2 REC	○
FR1DI-57(+)	FR1DI-57/X1-57	G	57	○	57	○	D01/QA-1 BKR OPEN	○
FR1DI-58(+)	FR1DI-58/X1-58	G	58	○	58	○	D01/QA-1 AUTO RECLOSE-FUTURE	○
FR1DI-59(+)	FR1DI-59/X1-59	G	59	○	59	○	D01/QA-1 86-1 OPT	○
FR1DI-60(+)	FR1DI-60/X1-60	G	60	○	60	○	D01/QA-1 86-2 OPT	○
FR1DI-61(+)	FR1DI-61/X1-61	G	61	○	61	○	D01/QA-1 94BF OPT	○
FR1DI-62(+)	FR1DI-62/X1-62	G	62	○	62	○	D01/QA-1 86BF OPT	○
FR1DI-63(+)	FR1DI-63/X1-63	G	63	○	63	○	D01/QA-1 94PD1 OPT	○
FR1DI-64(+)	FR1DI-64/X1-64	G	64	○	64	○	D01/QA-1 94PD2 OPT	○

X1-C

18 E7	X1-C-8	R	9	○	9	○	+125 VDC	○	DWG.NO#	SHT.:
			10	○	10	○	+125 VDC	○	DWG.NO#	SHT.:
			11	○	11	○	+125 VDC	○	DWG.NO#	SHT.:
			12	○	12	○	+125 VDC	○	DWG.NO#	SHT.:
			13	○	13	○	+125 VDC	○	DWG.NO#	SHT.:
			14	○	14	○	+125 VDC	○	DWG.NO#	SHT.:
			15	○	15	○	+125 VDC	○	DWG.NO#	SHT.:
20 E6	X1-C-17		16	○	16	○	+125 VDC	○	DWG.NO#	SHT.:

NOTES

GENERAL NOTES:
1. 24 CICT'S ARE RATED 1 AMP NOMINAL CURRENT. CICT'S ARE SUPPLIED LOOSE & MOUNTED REMOTELY.
2. DIGITAL INPUT FIELD CONTACT VOLTAGE IS 125VDC AND IS DISTRIBUTED ON X1-C.
3. LABEL NOTES:
AI REFERS TO ANALOG INPUT
DI REFERS TO DIGITAL INPUT
R REFERS TO RED
Y REFERS TO YELLOW
BLU REFERS TO BLUE
BLK REFERS TO BLACK
G REFERS TO GRAY
4. WIRE MARKERS ARE LOCATED AT BOTH ENDS OF EVERY WIRE DESIGNATING WIRE ORIGIN AND DESTINATION. WIRE MARKERS ARE HEAT SHRINK TYPE.

TS1-1/TR1-AI#1+ TS1-1/TR1-AI#1+
5. WIRE AT THE REAR OF THE RECORDER AND THE PHOENIX TERMINAL BLOCKS ARE TERMINATED WITH TERMINAL PIN LUGS.
6. ALL DIGITAL WIRING IS 18AWG 600V PVC TYPE WIRE.
ALL ANALOG WIRING IS 18AWG 600V PVC TYPE WIRE.
ALL 15 AMP POWER DISTRIBUTION WIRING IS 14AWG 600V PVC TYPE WIRE.
ALL 3AMP POWER DISTRIBUTION WIRING IS 18AWG 600V PVC TYPE WIRE.
7. WIRING THAT IS CONTINUED ON ANOTHER SHEET IS DENOTED WITH THE SHEET NUMBER AND LOCATION IN A HEXAGON AS FOLLOWS:
16
AI

8. PRIMARY FAN(F1) ARE CONTROLLED BY F1SC SPEED CONTROLLER SET TO ATTAIN FULL SPEED WHEN THE TEMPERATURE REACHES 40°C.

AMETEK S.O.# : 11002273-3

AMETEK DRAWING# : D-1105-212

SAITE P.D. # : API-D-0826-06656

REFERENCE DRAWINGS

DRAWING TITLE	DRAWING NO.
DRAWING CONTROL SHEET NUMBER	ED-306014

ISSUED FOR CONSTRUCTION

AS-BUILT BY DATE

00	27/01/15	SKT	ISSUED FOR CONSTRUCTION	MA					
REV. NO.	DATE	BY	DESCRIPTION	CHKD.	CERT.	APPD.			

الشركة السعودية للكهرباء
Saudi Electricity Company

DRAWN BY: MA CHECKED BY: SCALE: NONE
DATE STARTED: 28-11-12 DATE COMPLETED:
DPR'G. DEPT.: ENG. DEPT.:

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS CERTIFIED AND DATED
CERTIFIED BY: DATE:

TR-2200 FAULT RECORDER
FR1 DIGITAL CHANNEL 33-64 WIRING DET.
SEC-ROOM : IBN SINA S/S

JUBAIL SAUDI ARABIA

JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
3-1213004	P	T413	ED-306151	19 of 24	00

DIGITAL INPUTS

WIRE MARKER

FIELD CONNECTIONS

PHOENIX MTK TB

X1

FR1DI-65(+)	FR1DI-65/X1-65	G	65	○	—	○	65	—	⊗	230 kV	IBN ZAHR	LINE-A	RELAY SET-1	BUSBAR CH 1	REC V	
FR1DI-66(+)	FR1DI-66/X1-66	G	66	○	—	○	66	—	⊗	230 kV	IBN ZAHR	LINE-A	RELAY SET-2	BUSBAR CH 2	REC V	
FR1DI-67(+)	FR1DI-67/X1-67	G	67	○	—	○	67	—	⊗	SPARE						
FR1DI-68(+)	FR1DI-68/X1-68	G	68	○	—	○	68	—	⊗	SPARE						
FR1DI-69(+)	FR1DI-69/X1-69	G	69	○	—	○	69	—	⊗	SPARE						
FR1DI-70(+)	FR1DI-70/X1-70	G	70	○	—	○	70	—	⊗	SPARE						
FR1DI-71(+)	FR1DI-71/X1-71	G	71	○	—	○	71	—	⊗	SPARE						
FR1DI-72(+)	FR1DI-72/X1-72	G	72	○	—	○	72	—	⊗	SPARE						
FR1DI-73(+)	FR1DI-73/X1-73	G	73	○	—	○	73	—	⊗	SPARE						
FR1DI-74(+)	FR1DI-74/X1-74	G	74	○	—	○	74	—	⊗	SPARE						
FR1DI-75(+)	FR1DI-75/X1-75	G	75	○	—	○	75	—	⊗	SPARE						
FR1DI-76(+)	FR1DI-76/X1-76	G	76	○	—	○	76	—	⊗	SPARE						
FR1DI-77(+)	FR1DI-77/X1-77	G	77	○	—	○	77	—	⊗	SPARE						
FR1DI-78(+)	FR1DI-78/X1-78	G	78	○	—	○	78	—	⊗	SPARE						
FR1DI-79(+)	FR1DI-79/X1-79	G	79	○	—	○	79	—	⊗	SPARE						
FR1DI-80(+)	FR1DI-80/X1-80	G	80	○	—	○	80	—	⊗	SPARE						
FR1DI-81(+)	FR1DI-81/X1-81	G	81	○	—	○	81	—	⊗	230KV	TRANSFORMER T1	86T	OPERATED			
FR1DI-82(+)	FR1DI-82/X1-82	G	82	○	—	○	82	—	⊗	230KV	TRANSFORMER T1	86	OPERATED			
FR1DI-83(+)	FR1DI-83/X1-83	G	83	○	—	○	83	—	⊗	230KV	TRANSFORMER T1	INTERTRIP_RELAY	94S	OPERATED		
FR1DI-84(+)	FR1DI-84/X1-84	G	84	○	—	○	84	—	⊗	230KV	TRANSFORMER T1	WTI	(26W)	OPERATED		
FR1DI-85(+)	FR1DI-85/X1-85	G	85	○	—	○	85	—	⊗	230KV	TRANSFORMER T1	OTI	(26Q)	OPERATED		
FR1DI-86(+)	FR1DI-86/X1-86	G	86	○	—	○	86	—	⊗	230KV	TRANSFORMER T1	BH	(96)	FOR MAIN TANK	OPERATED	
FR1DI-87(+)	FR1DI-87/X1-87	G	87	○	—	○	87	—	⊗	230KV	TRANSFORMER T1	BH	(96)	FOR CHAMBER	OPERATED	
FR1DI-88(+)	FR1DI-88/X1-88	G	88	○	—	○	88	—	⊗	230KV	TRANSFORMER T1	BH	(96)	FOR OLTC	OPERATED	
FR1DI-89(+)	FR1DI-89/X1-89	G	89	○	—	○	89	—	⊗	230KV	TRANSFORMER T1	PRD	(63P)	FOR MAIN TANK	OPERATED	
FR1DI-90(+)	FR1DI-90/X1-90	G	90	○	—	○	90	—	⊗	230KV	TRANSFORMER T1	PRD	(63P)	FOR CHAMBER	OPERATED	
FR1DI-91(+)	FR1DI-91/X1-91	G	91	○	—	○	91	—	⊗	230KV	TRANSFORMER T1	PRD	(63P)	FOR OLTC	OPERATED	
FR1DI-92(+)	FR1DI-92/X1-92	G	92	○	—	○	92	—	⊗	230KV	TRANSFORMER T1	OLG	(71Q)	FOR MAIN TANK	OPERATED	
FR1DI-93(+)	FR1DI-93/X1-93	G	93	○	—	○	93	—	⊗	230KV	TRANSFORMER T1	OLG	(71Q)	FOR CHAMBER	OPERATED	
FR1DI-94(+)	FR1DI-94/X1-94	G	94	○	—	○	94	—	⊗	230KV	TRANSFORMER T1	OLG	(71Q)	FOR OLTC	OPERATED	
FR1DI-95(+)	FR1DI-95/X1-95	G	95	○	—	○	95	—	⊗	SPARE						
FR1DI-96(+)	FR1DI-96/X1-96	G	96	○	—	○	96	—	⊗	SPARE						

X1-C

19	E7	X1-C-16	R	17	○	—	○	17	—	⊗	+125 VDC						
				18	○	—	○	18	—	⊗	+125 VDC						
				19	○	—	○	19	—	⊗	+125 VDC						
				20	○	—	○	20	—	⊗	+125 VDC						
				21	○	—	○	21	—	⊗	+125 VDC						
				22	○	—	○	22	—	⊗	+125 VDC						
				23	○	—	○	23	—	⊗	+125 VDC						
				24	○	—	○	24	—	⊗	+125 VDC						

21

E6

X1-C-25

ISSUED FOR CONSTRUCTION

AS-BUILT BY _____ DATE _____

00 27/01/15 SKT ISSUED FOR CONSTRUCTION MA

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Saudi Electricity Company

DRAWN BY: MA CHECKED BY: _____ SCALE: NONE
DATE STARTED: 28-11-12 DATE COMPLETED: _____
DPR'G. DEPT.: _____ ENG. DEPT.: _____

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CERTIFIED BY: _____ DATE: _____

TR-2200 FAULT RECORDER
FR1 DIGITAL CHANNEL 65-96 WIRING DET.
SEC-ROOM : IBN SINA S/S

JUBAIL SAUDI ARABIA

JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
3-1213004	P	T413	ED-306151	20 of 24	00

NOTES
GENERAL NOTES:
1. 24 CICT'S ARE RATED 1 AMP NOMINAL CURRENT. CICT'S ARE SUPPLIED LOOSE & MOUNTED REMOTELY.
2. DIGITAL INPUT FIELD CONTACT VOLTAGE IS 125VDC AND IS DISTRIBUTED ON X1-C.
3. LABEL NOTES:
AI REFERS TO ANALOG INPUT
DI REFERS TO DIGITAL INPUT
R REFERS TO RED
BLU REFERS TO BLUE
Y REFERS TO YELLOW
BLK REFERS TO BLACK
G REFERS TO GRAY
4. WIRE MARKERS ARE LOCATED AT BOTH ENDS OF EVERY WIRE DESIGNATING WIRE ORIGIN AND DESTINATION. WIRE MARKERS ARE HEAT SHRINK TYPE.
5. WIRE AT THE REAR OF THE RECORDER AND THE PHOENIX TERMINAL BLOCKS ARE TERMINATED WITH TERMINAL PIN LUGS.
6. ALL DIGITAL WIRING IS 18AWG 600V PVC TYPE WIRE.
ALL ANALOG WIRING IS 18AWG 600V PVC TYPE WIRE.
ALL 15 AMP POWER DISTRIBUTION WIRING IS 14AWG 600V PVC TYPE WIRE.
ALL 3AMP POWER DISTRIBUTION WIRING IS 18AWG 600V PVC TYPE WIRE.
7. WIRING THAT IS CONTINUED ON ANOTHER SHEET IS DENOTED WITH THE SHEET NUMBER AND LOCATION IN A HEXAGON AS FOLLOWS:
8. PRIMARY FAN(F1) ARE CONTROLLED BY F1SC SPEED CONTROLLER SET TO ATTAIN FULL SPEED WHEN THE TEMPERATURE REACHES 40°C.

TS1-1/TR1-AI#1+ TS1-1/TR1-AI#1+

16
AI

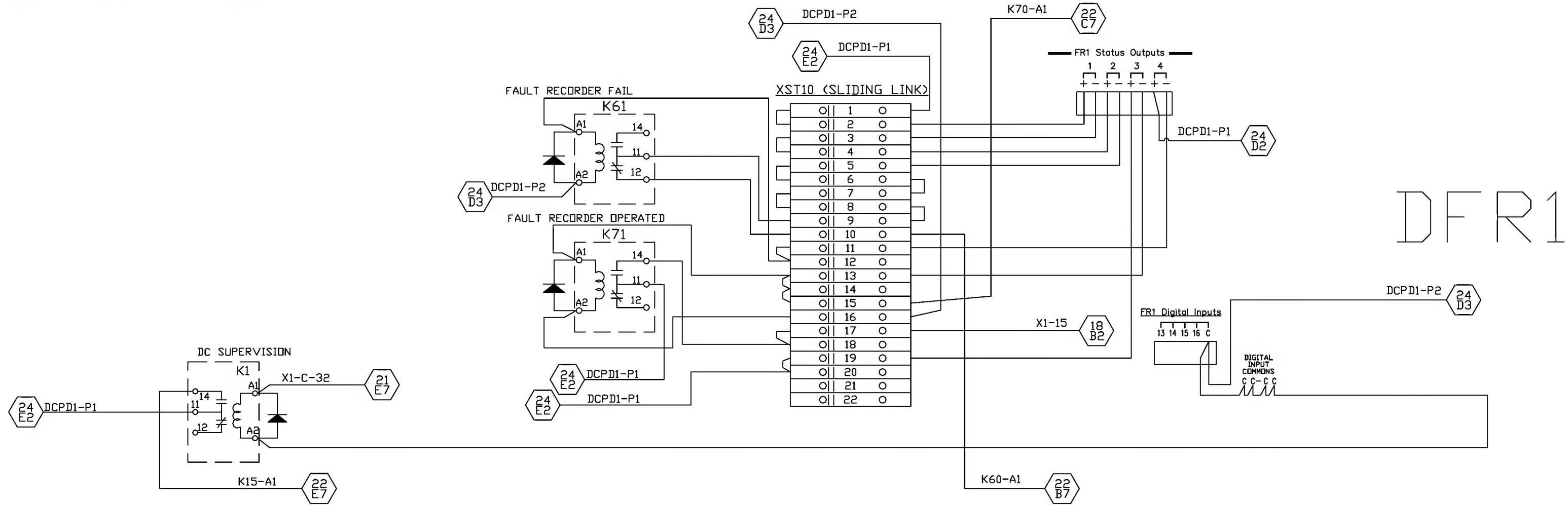
AMETEK S.O.# : 11002273-3
AMETEK DRAWING# : D-1105-212
SAITE P.O. # : API-D-0826-06656

REFERENCE DRAWINGS	
DRAWING TITLE	DRAWING NO.
DRAWING CONTROL SHEET NUMBER	ED-306014

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2				1			
JOB ORDER NO.	3-1213004	INDEX	P	PLANT NO.	T413	DRAWING NUMBER	ED-306151
REV. NO.		23 of 24		SHEET NO.		00	

INDIVIDUAL STATUS RELAYS



- NOTES
- STATUS RELAY NOTES:
1. POWER (STATUS OUTPUT 1) CLOSED WHEN POWER IS ON.
 2. ON-LINE (STATUS OUTPUT 2) CLOSED WHEN TR IS ON-LINE.
 3. TRIGGERED (STATUS RELAY 3) WILL CLOSE FOR 0.5S WHEN TR IS TRIGGERED.
 4. ATTENTION (STATUS OUTPUT 4) OPEN UNDER NORMAL OPERATION.
 5. RELAY K60 (FAULT RECORDER FAIL) -ENERGIZED UNDER NORMAL OPERATION -DE-ENERGIZES UPON LOSS OF POWER, TR GOING OFF-LINE, OR UPON ATTENTION STATUS ALARM.
 6. RELAY K70 (FAULT RECORDER OPERATED) -DE-ENERGIZED UNDER NORMAL OPERATION. -ENERGIZES UPON TR TRIGGERING. -ADJUSTABLE ENERGIZING TIME 0.1 SEC. TO 270 SEC.
 7. RELAY K15 (DC SUPERVISION) -ENERGIZED UNDER NORMAL OPERATION. -DE-ENERGIZES UPON LOSS OF FIELD CONTACT / RELAY VOLTAGE.
 8. ALL RELAYS ARE SHOWN IN SHELF STATE.
 9. DIGITAL INPUT #15 IS USED FOR CROSS-TRIGGERING IN ALL RECORDERS.

AMETEK S.O.# : 11002273-3

AMETEK DRAWING# : D-1105-212

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TR-2200 FAULT RECORDER

INDIVIDUAL STATUS RELAYS

SEC-ROOM : IBN SINA S/S

JUBAIL SAUDI ARABIA

JOB ORDER NO.	3-1213004	INDEX	P	PLANT NO.	T413	DRAWING NUMBER	ED-306151	SHEET NO.	23 of 24	REV. NO.	00
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1105-212_23.DWG

SEC-ERB CAD-A (2002/04)

DMS VECTOR

Code03